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In Plain English

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Driver Updates



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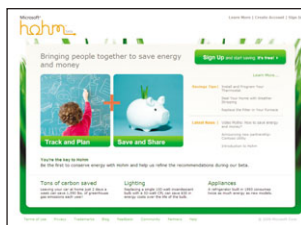
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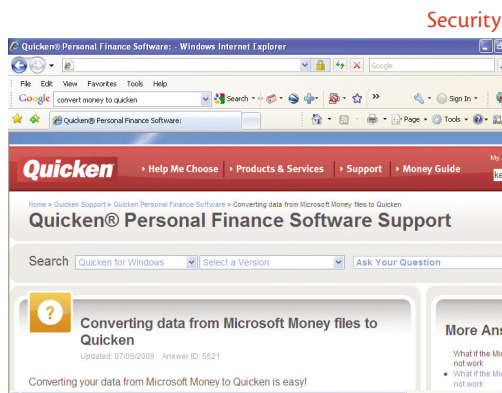
Organize Outlook 2007 With Saved Searches

Personal Finance

Moving Money

Security

Manage Whitelists & Blacklists



Editor's Note

One of the most frustrating aspects of troubleshooting is that you rarely know how long it will take you to find the solution.

After eating a few reheated dinners, I've learned not to delay other activities in hopes that this next potential fix (or maybe the next one) will get the computer up and running. When you're really stumped, you don't know whether the fix is five minutes away—or three hours.

Many computer enthusiasts (myself included) try the quick fixes first, even if they're long shots. After all, if you try three quick fixes and none of them works, you might have wasted only 15 minutes. Try a fix that involves reinstalling software or other time-consuming chores, and you'll be pretty disappointed when the "fix" turns out not to be one.

Nope, the quick fix is my first choice. And this month, we're taking a look at a quick fix that should be at the top of your list: updating drivers. Why? Because it's not nearly as long of a shot as the others. Fresh drivers really do solve many problems, and they're easy to install (and it's a fast process).

On top of that, your new driver may erase other hardware quirks (or add functionality), even if it doesn't solve the original problem. So, if your computer is on the blink, flip through this issue before you roll up your sleeves. The end to your PC woes might be right around the corner. And if the driver doesn't change anything? Well, reheated dinner usually isn't too bad.

Joshua B. Gulick

Joshua Gulick

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In Plain English

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take the car to
the dealer to find out
what the problem is!
Excellent product."

— Chuck P., Persia, IA

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Car problems don't care if you have an important business trip or family vacation planned. So what do you do when that dreaded "Check Engine" light comes on just hours before your big trip? Drive straight to the mechanic? Cancel your trip? Maybe it's just a loose gas cap. But what if it's something expensive that will take days to fix? Thanks to the revolutionary CarMD handheld device, now virtually everyone who owns a vehicle can quickly and easily solve automotive repair mysteries — right from home.

How It Works

When your car's "Check Engine" light appears, just plug the CarMD handheld device into your vehicle's Data Link Connector (DLC). The DLC is a small port found right under the dashboard on all 1996 and newer vehicles. It's the same place your mechanic plugs in his expensive diagnostic tools. Not sure where to look? Visit www.CarMD.com to search by year, make and model.

In seconds, CarMD beeps to confirm the test is complete. Then the tool's built-in LEDs let you know how severe the problem is (Green = OK, yellow = possible problem, red = service required). A yellow light can even help you catch a hidden engine problem before you're miles into your next road trip.

To learn more about your car's problem, connect CarMD to your computer using the included software and USB cable. CarMD customers gain free access to an extensive online database (www.carmd.com) that helps diagnose the cause and estimate what repairs should cost down to fair parts and labor in your region. The reports can be used to help do-it-yourselfers with repairs, and give you a bargaining tool with your mechanic.

Stay Green

CarMD can make your car "greener" too. The "Check Engine" light often indicates problems with the emissions system. CarMD can diagnose problems that lower your mileage and pollute the environment.

Why Everyone Needs CarMD

- CarMD works on 1996 and newer cars, light trucks, minivans and SUVs — foreign and domestic. For sale in the U.S. only.
- CarMD helps used car buyers avoid "lemons"
- Lifetime software updates mean the CarMD tool you buy today will work on the car or truck you invest in tomorrow.
- CarMD includes toll-free (888.My-CarMD) access to ASE Certified Techs for diagnosis when you can't get to your PC.
- Stock up now for holiday gift giving.



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www.CarMD.com/Smart using
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AVerMedia AVerTVHD Volar Max | \$69.99 | www.avermedia-usa.com/AVerTV

HDTV On The Go For Your Mac Or PC

Selected as one of the top 25 best back-to-school gadgets by *Time* magazine, the AVerTVHD Volar MAX has your Digital HDTV solution for your Mac or PC. Thanks to the Digital TV (ATSC) and Unencrypted Digital Cable (ClearQAM) reception, the AVerTVHD Volar MAX is the ideal travel mate for HDTV on the go.

How It Works

The AVerTVHD Volar MAX includes the AVerTV for Mac application that supports Mac OS and the AVer Media Center application which also supports Windows OS for breathtaking and glorious Digital HDTV viewing. Simply con-

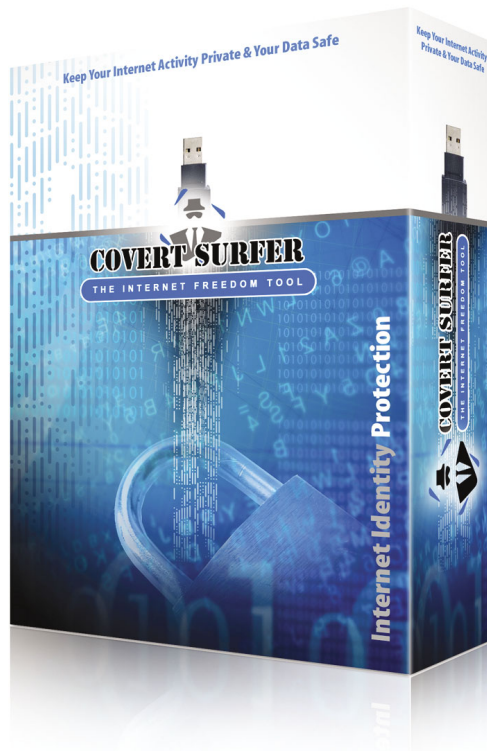
nect the AVerTVHD Volar MAX to your Mac or PC notebook's USB port and install the appropriate software (Mac or PC). The easy-to-use software and wizard will guide you through to configure your TV settings and scan for HDTV channels.

Features & Benefits

- Watch over-the-air Digital TV and Unencrypted Digital Cable anytime and anywhere on your Mac or PC
- HDTV quality up to 1080i
- Record video in H.264 format and play back on your iPod, iPhone, or PSP (PC only)

- Schedule recordings of your favorite TV shows to your hard drive with the PVR (Personal Video Recorder)
- Enhance your entertainment experience with 16:9 Widescreen mode
- Supports Closed Caption
- Convenient USB 2.0 interface and 75Ohms TV antenna allow you to connect when you're at home or on the go
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Identity Theft Protection On The Go

In a recent college campus Internet security survey, identity theft, invasion of privacy, and cookie cleaning were the top three concerns. Covert Surfer, the Portable Internet Freedom Tool, uses National Institute of Standards and Technology (NIST) approved 256-bit AES encryption to protect your identity and personal information while you are surfing the Internet.

How It Works

Covert Surfer automatically changes your IP Address; encrypts your Internet connection (including wireless) and erases cookies, Internet history, and cached files that are left on your computer. Covert Surfer eliminates any trace of your presence on your computer. Hackers, ISPs, or other individuals who attempt to pry into your computer can't observe what websites you are browsing, emails you are reading, or even your actual location.

Features & Benefits

- Completely portable & easy to use. Simply download to a USB drive and take it with you.
- Provides security for WiFi (wireless) networks to include cellular wireless cards (EVDO and others) as well.
- Prevents others from seeing what Web sites you visit and what content you are looking at, protecting your identity using NIST approved 256-bit AES packet encryption.
- Protects your passwords, usernames, and account numbers as you securely and anonymously surf the Internet.
- Automatically deletes cookies, preventing Web sites and others from collecting information about you.

- Automatically erases your temporary Internet files, and history via our Registry Clean process.
- Safely stores all of your important information using the built-in File Encryption tools.
- Leaves NO trace of your Internet activity on the computer or laptop.
- File shredding: Permanently destroy files beyond current forensic technology.

Visit www.covertsurfer.com to instantly start browsing the Web securely and anonymously.



Sony's VAIO Finally Gets The Netbook Treatment

Add Sony to the growing list of notebook manufacturers that have boarded the netbook bandwagon. Although Sony calls it the "VAIO P Series Lifestyle PC," make no mistake: This 8-inch, 1.4-pound device is pure netbook, complete with a choice of trendy colors.

The VAIO P features an instant-on, ultra-bright, LED (light-emitting diode)-backlit screen within a flat clamshell case that comes in one of five colors (Crystal White, Emerald Green, Garnet Red, Onyx Black, or Gold). Turn-by-turn GPS (global positioning system) navigation is built into the VAIO P, allowing users to simply type a keyword to find local results via Microsoft's Streets & Trips software. The GPS function also delivers points of interest, real-time tracking of

current location, and estimated drive times to locations.

For mobile broadband users, this netbook features integrated Verizon Wireless Mobile Broadband (broadband Internet service sold separately) that requires no external card. Also, a one-button, quick-boot function called Instant Mode provides quick access to the VAIO P's computing functions, including Sony's Xross Media Bar, which is also found on the PlayStation 3 and some Bravia HDTVs (high-definition TVs).

The base model (\$999.99; www.sonystyle.com) includes a 1.33GHz Intel processor, a 64GB SSD (solid-state drive), 2GB of 533MHz DDR2 (double-data-rate 2) memory, a 1,600 x 768 Xbrite-Eco display, Intel high-definition integrated audio, lithium-ion battery with up to four hours of capacity, built-in

Motion Eye camera, microphone, full QWERTY keyboard, two USB 2.0 ports, and a multimedia card reader. Also included are integrated Bluetooth and 802.11b/g/n wireless technology. On the software side, this model includes Windows Vista Home Premium, Sony's VAIO Multimedia Suite, and Microsoft Works.

The midrange model retails for \$1,499.99 and is available only in Onyx Black or Garnet Red but upgrades the processor (1.6GHz) and storage (128GB SSD). Finally, the VAIO P Signature Collection (available only in Onyx Black) retails for \$1,999.99 and includes a 1.86GHz processor and a 256GB SSD. All models of the VAIO P Series are eligible for a free upgrade to Windows 7 when the new Microsoft operating system is available. ■



Sony's VAIO P Series netbook offers function along with its flash, integrating turn-by-turn GPS, mobile broadband, and a quick-boot function that won't make you wait to get started.

STORAGE

SSD For The Penny Pinchers

In a rough economy, upgrading a hard drive to a pricey solid-state drive isn't an option for many consumers. However, Kingston Technology (www.kingston.com) now has a solution designed to let customers get a taste of SSD performance without paying the exorbitant costs typically associated with the flash-based technology.

The company's SSDNow V Series SSD upgrade kits include an SSD drive, Acronis True Image cloning software and CD installation guide, 3.5-inch mounting brackets and hardware (in the desktop bundle), SATA (Serial Advanced Technology Attachment) data and power cable extenders (in the desktop bundle), and a 2.5-inch USB SATA external enclosure (in the notebook bundle).

According to Kingston's internal benchmark tests, users of these drives can expect an overall drive improvement of roughly 50% over existing 7,200rpm and 5,400rpm hard drives.

The drives have read speeds up to 100MBps (megabytes per second) and write speeds up to 80MBps, and like other SSD drives, they have no moving parts and run silently. Two storage capacities are available in both desktop and

notebook bundles: 64GB (\$149) and 128GB (\$263). All drives are backed by a three-year warranty and include 24/7 tech support. ■



In Kingston's SSDNow kits, you'll find everything you need to install the included solid-state drive in either your desktop or laptop computer, including software and mounting brackets.

DISPLAYS

Two Displays, One Purchase

Recently, we covered LCD monitor stands that can accommodate more than one LCD panel for a dual-display environment that consumes minimal space. The downside of these stands is that you're stuck paying for three devices: two monitors and a stand. Evga's InterView, on the other hand, blends all three and has just one price tag.

The InterView (\$649.99; www.evga.com) features dual 17-inch widescreen TFT (thin film transistor) LCD panels, each with a resolution of 1,440 x 900, a contrast ratio of 500:1, and a response time of 8ms (milliseconds). Included are a built-in 1.3MP (megapixel) Web cam, built-in microphone, and three USB 2.0 ports.

The biggest highlight of the InterView is the stand architecture, which allows the screens to rotate 180 degrees on a horizontal axis. When the screen is flipped, the InterView automatically inverts the on-screen image so that it appears correctly for a user on the opposite side. This type of configuration can be useful for collaboration, particularly when

a user wants to demonstrate something to someone situated on the opposite side of the monitor.

The rotating function works both inside and outside of the operating system. The InterView also functions in a standard dual-display configuration where the Windows Desktop is extended to the second display. ■



If you're looking for a dual-display configuration with the ability to share your screen, check out the Evga InterView, which can flip the displays and rotate the images.

PRINTERS & PERIPHERALS

Mobile Computing Without Cramped Hands

Mobile-minded users generally lean toward smaller devices to satisfy their need for convenience. But while that preference might allow computing in tight spaces, that cramped behavior doesn't always bode well for user health. The Goldtouch Go! Travel Keyboard looks to bridge the gap between mobile convenience and ergonomics.

The Go! (\$139; www.goldtouch.com) weighs 1.1 pounds and has keys that are approximately the same size as the keys on 14-inch notebooks. However, the distance between keys is larger than what you'll find on many other compact keyboards (3.2mm on the Go! vs. 2mm on other compact keyboards). Further, the Go! allows up to a 30-degree adjustment for ulnar deviation (or wrist splay) in the horizontal position, along with up to a 30-degree adjustment for wrist pronation (or vertical tenting).

The Go! can be used on its own or in tandem with a protective removable cover that allows the user to place the keyboard on a notebook over the existing (and nonadjustable) keyboard. The keyboard is compatible with Windows 2000/XP/Vista and Mac operating systems. ■



Ergonomic mobile typing can be a reality with the Goldtouch Go!, an adjustable keyboard that can be situated on top of existing notebook keyboards.

CPUs, CHIPS & CARDS

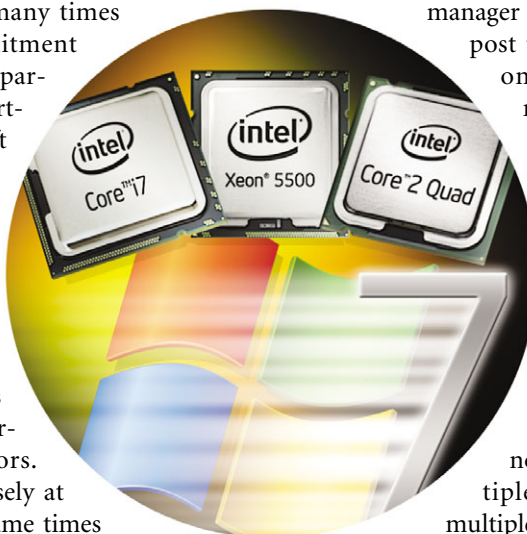
Intel, Microsoft Team To Boost Windows 7 Performance

Intel is no stranger to Microsoft, as the two computing giants have teamed up many times over the years, including a commitment last year to further multicore and parallel processing initiatives. That partnership continues today as Microsoft recently revealed how Intel has worked closely with Microsoft since the beginning of the Windows 7 development process to optimize the upcoming operating system for Intel processors.

In particular, Windows 7 will feature SMT parking, which boosts multitasking performance on hyper-threaded, multicore Intel processors. Further, the companies looked closely at the boot, shutdown, sleep, and resume times on Intel platforms to optimize various components

and improve those times. Joakim Lialias, Intel alliance manager for Microsoft, said in a Microsoft blog post that the companies also collaborated on energy efficiency, power management, and battery life.

Windows 7 will take advantage of multicore processors more efficiently than any other Windows operating system to date. Although modern systems include the processing horsepower to handle multiple applications and processes simultaneously, plenty of factors can conspire to create delays during multitasking. Microsoft researchers note that Windows 7 can harness multiple cores to prevent delays caused by multiple applications waiting for each other to complete certain tasks. ■



DIGITAL MISCELLANEA

Best Buy Joins Forces With TiVo

Best Buy and TiVo recently partnered to boost the distribution of TiVo products and provide Best Buy with a digital platform to better serve its customers. The strategic alliance includes potential plans to create a unique user interface for TiVo DVRs (digital video recorders) that are purchased at Best Buy.

“Best Buy and TiVo together will open up a variety of new ways for consumers to get the most out of their entertainment experience, have more digital content choices, and get on-demand access to Best Buy’s trusted perspective in consumer electronics,” says Chris

Homeister, senior vice president of entertainment at Best Buy. The two companies are also looking into developing a series of easily accessible consumer tips covering a wide range of digital home experiences.

For consumers, this partnership means that they’ll likely be seeing plenty of TiVo promotion in Best Buy stores across the country. Likewise, TiVo DVRs sold in Best Buy stores could feature heavy Best Buy advertising. The companies also have plans to integrate TiVo technology into Best Buy’s Insignia HDTVs and other in-house products. ■



PROBLEM-SOLVER: TROUBLESHOOTING THE NEWS

My computer occasionally fails to recognize an internal hard drive.

Try using a different cable (IDE [Integrated Drive Electronics] or SATA, depending on the drive type) to rule out a faulty cable. Also, try a different power supply cable from your computer’s power supply unit. If these solutions don’t work and the problem is getting worse, your drive could be failing. Immediately back up any data on the drive and replace it to be safe.

Whenever I uninstall my graphics card’s display drivers, Windows installs its own.

If you’re uninstalling display drivers in order to install updated

drivers, that’s how the process should work. Uninstall the drivers using the Device Manager or Add Or Remove Programs, reboot your PC, and let Windows install the device drivers. Then, install the updated drivers designed for your graphics card.

I cannot use my USB keyboard until my PC boots into Windows.

If you need to use your keyboard before Windows starts (and sooner or later, you’ll likely need that ability to modify the BIOS [Basic Input/Output System] or select an alternate Windows boot option), attach a USB-to-PS/2 converter to your keyboard and boot your PC. Alternately,

temporarily use a PS/2 keyboard. Next, enter the BIOS and enable USB keyboard support.

I applied heatsink grease to my quad-core CPU, but the chip’s temperatures are high.

Even if you spread a very thin layer of thermal grease over the entire surface of your quad-core (or tri-core) CPU, you still might have applied too much. These processors don’t require the standard grease application method. Instead, simply put a small dab of grease in the middle of the processor and then install the heatsink. The grease will spread properly as the CPU heats up. ■

Palm's Pre Breaks The Mobile Communication Mold

Competition in the smartphone market is at an all-time high, with Apple, Research In Motion, and others battling to reign supreme in the land of sleek, innovative handheld devices. A name from the past is the latest to garner attention with a device that further evolves the smartphone segment with features designed to make communication and planning a seamless process.

At first glance, the Palm Pre (\$199.99 with rebate and two-year Sprint service agreement; www.palm.com) looks like other popular smartphones, with a 3.1-inch touchscreen filling much of the phone's real estate. But the Pre doesn't limit users to on-screen typing, as the screen slides upward to reveal a QWERTY keyboard with big keys. Further, the device has powerful features that satisfy a wide range of communication tasks, from work to leisure.

One of the most attractive features of the Pre is its ability to blend information from various sources. For example, it can layer calendars from Microsoft Outlook, Google, and Facebook into a single view so that you don't need to scramble among various screens to ensure you're not missing an appointment. Similarly, the device can gather contacts from various sources and link them.

Palm applies the same ease-of-use philosophy to applications, which are referred to as "activity cards" that can



You won't need to fumble around multiple screens to find your daily tasks and appointments with the Palm Pre, which layers calendars from Microsoft Outlook, Google, and Facebook into a single view.

all remain open and appear as card-like boxes on the Pre's screen. If you open your email client, browser, photos, maps, and other applications, you can easily flip through them, slide them around, or even "toss" them off the screen. Also grouped are conversations with the same person, with Palm's Synergy technology combining conversations in a single chat-style view.

A notification banner at the bottom of the Pre's screen alerts you to new voicemails, email messages, and

other notifications. Thanks to the banner, you can continue your on-screen activities without being pulled away to immediately address a contact—but you'll know it's there to address later. Palm's all-in-one approach also appears in the Pre's search function, which lets you simply start typing to search contacts and applications. If you need more sources, the Pre will also offer to search Google, Google Maps, Wikipedia, or Twitter. ■

DULY QUOTED

"Our 'solution' to the problem was stupid, thoughtless, and painfully out of line with our principles. It is wholly self-inflicted, and we deserve the criticism we've received."

—Amazon CEO Jeff Bezos apologizes for the way his company handled copyright issues surrounding a title included on Kindle reading devices. Amazon remotely deleted digital editions of George Orwell's "1984" and "Animal Farm" without informing Kindle owners.

Source: Kindle Community Forum

News From The Help Desk

Our Most Common Tech Calls

COMPILED BY KRIS GLASER

Each month, we receive numerous technical support calls and email messages. Some computer problems are fairly common, and we find that many callers struggle to resolve the same issues. In this article, we cover some of the most common or timely tech support questions and provide our solution for each of them.

Q When I attempted to shut down my recently purchased notebook, I received a pop-up message telling me that there were other users logged in to my computer and that shutting down may cause them to lose data. I am the only person using my computer, so who could be logged in to my computer?

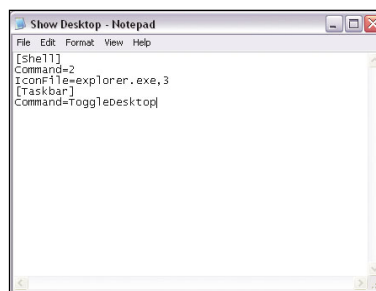
A When this message appears, it is likely caused by one of the following situations. First, if your computer is networked, and you are sharing files or a printer on the network, it could be that someone has opened a shared file or is using the printer connection. If you think that another computer on the network is causing the problem and you have access to it, shut down that computer first, and then turn off your computer to see if the warning persists. This situation is not likely threatening, but if you prefer, you can disable sharing on your computer to ensure that no one on the network can access your files.

If your computer is connected to an unencrypted wireless network, this message could be the result of an unknown person accessing information in one of your shared folders. You can prevent Internet leeching and personal data invasion by encrypting your wireless network. Consult your router's users manual for instructions on how to configure encryption settings.

One last reason that this message could occur lies in Windows' ability to create multiple user accounts so that family members or co-workers can each have their own preferences, folders, and settings. Users can easily switch between accounts without having to shut down their programs or close their files. If you attempt to shut down the computer while another User Account is still open, you may receive the above warning.

Q When I have multiple programs and documents open, it can be a hassle to minimize every window in order to get to the Desktop. I used to use the Show Desktop icon on the Quick Launch toolbar, but now it's missing. Is there a way to restore the Show Desktop icon?

A Restoring the Show Desktop icon to your Quick Launch toolbar is a quick and easy task. First, in Windows XP, go to the Start menu and choose Run. In the Open box, type **Notepad** and then click OK. In Vista, simply type **Notepad** in the Start Search box and press ENTER. On the Notepad page, carefully type the following commands, excluding semicolons, putting each command on a new line: [Shell]; Command=2; IconFile=explorer.exe,3; [Taskbar]; Command=ToggleDesktop. Go to File and choose Save As. Name the file Show Desktop.scf and save it to your Desktop. This creates a Show Desktop shortcut on your Desktop. To place the shortcut on the Quick Launch toolbar, click the shortcut and drag it down to the toolbar alongside your other program icons.



You can restore the Show Desktop icon to your Quick Launch toolbar by creating a special file with Notepad.

If you're using WinXP, Microsoft can instantly repair this problem for you. Navigate to support.microsoft.com and type KB190355 in the search field and press ENTER. On the results page, click How To Re-create The Show Desktop Icon On The Quick Launch Toolbar. In the middle of the page, click Fix This Problem and save the .EXE file to your hard drive. When the file is downloaded, double-click it to begin the installation. Follow the on-screen directions to complete the repair.

Q I was recently prompted to install Adobe Flash Player 10. I downloaded and installed the program, but when I attempted to watch a video, Internet Explorer told me I needed to upgrade. I installed the program a second time, but I am still prompted to upgrade to version 10. Why won't my Flash Player installation stick?

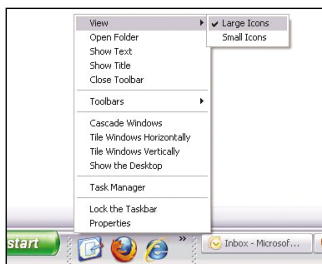
A Adobe's Flash Player 10 may not be installing correctly because an older version already running on

You can prevent Internet leeching and personal data invasion by encrypting your wireless network.

your computer is interfering with the installation. The first step to correcting this issue is to download, install, and run the Uninstall Flash Player program found at www.adobe.com. In the search field at the top of the page, type **tn_14157** and press ENTER. On the results page, click the **How To Uninstall The Adobe Flash Player Plug-In And ActiveX Control** link. Next, under **Download The Adobe Flash Player Installer**, click the **Uninstall_flash_player.exe** link and save the removal tool to your hard drive. Make sure you exit all applications, including your Internet browser and instant messaging programs. Locate the removal tool and double-click it to begin the installation. Follow the directions to uninstall the Flash Player from your computer and then restart your PC.

Once the computer has booted, you'll need to redownload the Flash Player. If you are using Vista, you may need to run your browser in Administrative mode, as not doing so may cause the installation to fail due to security restrictions. To run Internet Explorer in Administrative Mode, go to Start, click All Programs, right-click Internet Explorer, and choose Run As Administrator. Next, navigate to Adobe's Web site, mouse over Downloads at the top of the page, and choose Get Flash Player. Click the yellow button that says Agree And Install Now to begin the installation.

Q I have trouble seeing, so the items located on the Quick Launch toolbar are difficult for me to use. Is there a way to enlarge the icons so that they are more visible?



Making the icons on the Quick Launch toolbar larger will help you see them more clearly.

A Enlarging the icons on the Quick Launch toolbar is easy. First, in both WinXP and Vista, right-click a blank area on the Taskbar (the pane lining the bottom of your Desktop, where you find the Start menu). Next, uncheck **Lock The Taskbar**. A set of vertical lines will appear around the Quick Launch toolbar. By clicking and dragging these left and right, you can expand and contract your list of icons. Right-click any free space between the two vertical dotted lines (but not on any icons) and choose **View**. From the menu, choose **Large Icons**. If you are satisfied with the Large Icon option, right-click the Taskbar a second time and checkmark **Lock The Taskbar**. ■

Feature Package Topics

Each *Smart Computing* issue includes tips, reviews, and information about a variety of topics. However, each issue also has a featured group of articles about a selected topic. Below is a list of the Feature Packages from the previous year. As a *Smart Computing* subscriber, you have access to all of our archived articles at www.smartcomputing.com.

October 2008:	Boost Your PC's Performance
November 2008:	Reinstall Windows
December 2008:	Holiday Gift Guide
January 2009:	Did You Really Back Up?
February 2009:	Solve Windows Problems
March 2009:	Clean Out Old Software Clutter
April 2009:	Save Money On Your PC
May 2009:	Restore Windows
June 2009:	Get More Mileage Out Of Your PC
July 2009:	8 PC Emergencies
August 2009:	Stay Safe Online
September 2009:	Master Your Browser

Germ-Free Typing

Kensington Washable Keyboard

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LINNÉ@SMARTCOMPUTING.COM

Microbiophobia, mysophobia, bacteriophobia, germophobia . . . whatever phobia it is that relates to the fear of germs and dirt, I think I have that. OK, that might be a bit of an exaggeration—I've never actually been clinically diagnosed with any type of phobia, but I am a tad paranoid about germs and the spread of bacteria. And, I do spend an unusual amount of time washing my hands. That said, I might border on obsessive compulsive disorder. The bottom line is: I like to keep things clean, organized, and sanitary.

And then there's my keyboard.

At my workplace, I have this one keyboard at my desk that has gotten really grungy over time (and that's just what you can see on the surface). Somehow, even after I hook up another keyboard to test or review, I end up with the same old dirty one. The new keyboard I've been testing the past few weeks, the Kensington USB/PS2 Washable Keyboard, is a

wise idea for a hygiene-conscious person like me—if it gets dirty or gets passed around the office and used by others, I can just give it a bath. Literally.

The Kensington Washable Keyboard is waterproof, it can be easily cleaned, and it features a “built-in microbial finish that provides continuous microbe-fighting action.” To make it

sound less like a superhero and more like a keyboard, simply put, the special antimicrobial coating helps protect against the spread of germs.

I had only been using the keyboard for less than a month, so it really wasn't noticeably dirty. But, as fellow germophobes know, it's not necessarily what meets the eyes. I knew there had been some colds spreading around the office, and although not many people use my keyboard (except for the friendly IT folks who occasionally fix my

computer after I've broken it), I still wanted to put the Kensington keyboard through its paces and give it a little rinse.

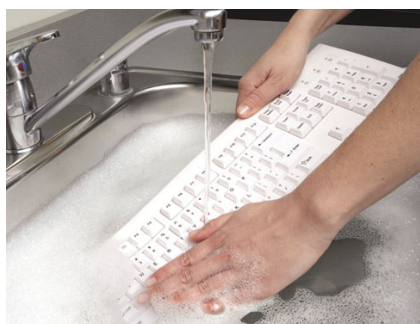
The concept of a washable keyboard isn't new; I've seen others on the market, but the idea of soaking an electronic device in water still seemed novel. So, I took it home after the first few weeks of use and ran it under the kitchen tap. I used a sponge and some general purpose cleaner to lightly scrub the keys. Afterward, I turned the keyboard upside-down to let it air-dry overnight. Going against all caution that electronics and liquids don't mix, it felt as though I had just done something terribly wrong.

However, the next morning, I plugged in the keyboard to find it fully functional—and most importantly, clean. (Of course, as Kensington instructs, never immerse the USB connector in water. Therefore, don't go tossing this keyboard in the dishwasher or dunking it in the bathtub, because you likely won't have the success I had in keeping it functional.)

This keyboard is primarily intended for use in communal work environments, such as hospitals, labs, schools, and government agencies. However, it would also be fitting for a small-business setting or a family office, where lots of hands (especially the little hands of kids and grandkids) frequently share the computer peripherals.

Admittedly, without its waterproof and antimicrobial qualities, there is nothing fancy about the keyboard itself. There are no multimedia keys and no special features, but typing on the keyboard is comfortable. The keys are soft-touch but responsive, and they are somewhat textured (almost like you can feel the special antimicrobial coating). Otherwise, it's a typical, standard-sized, USB/PS2 plug-and-play keyboard. And it's bright white—ah, clean. That said, if you need a new keyboard, and you're looking for a basic model, you might consider this washable keyboard. At just under \$40, the friendly price is comparable to other low-end keyboards, but you also gain the peace of mind knowing you can safely wash it and that it reduces the spread of germs all on its own.

Whether you're constantly in an environment where sanitization is crucial, or you simply like the idea of clean, germ-free typing, the Kensington Washable Keyboard is a good fit for all the neat freaks among us. ■



Washable USB/PS2 Keyboard
\$39.99
Kensington
(800) 235-6708
us.kensington.com

Pioneer BDR-2203

Blu-ray Creeps Closer To Practicality

MARTY SEMS

SEND YOUR COMMENTS TO
MARTY@SMARTCOMPUTING.COM

Assuming you're in the majority of computer users, what has been keeping you from adding a BD (Blu-ray Disc) burner to your PC?

Sure, you can buy a playback-only BD-ROM drive for about \$60 online, and it will play DVDs and CDs, too. That's less than half the price of a standalone BD player you would hook up to your HDTV. DVD/CD burners that also play BDs start at about \$85. But in a computer, it's the promise of archiving up to 25 or 50GB on a single disc that is Blu-ray's real draw—and for that, you need a burner.

On The Fence

The cost of recordable BDs is still a sticking point for many of us when blank DVDs sell for as little as 18 cents each (4 cents per gigabyte) online. Prices are coming down, however: We found BD-R25 discs starting at \$3.20 each in bulk (13 cents per gigabyte). BD movies still cost more than DVDs, though, at about \$20 to \$40 compared to \$10 to \$25 for the older discs.

Then there are the onerous system requirements. The powers that be certainly haven't made Blu-ray very inviting to PC users, largely because without computers, DVD and CD piracy wouldn't be a problem.

Personally, I haven't yet made the jump to Blu-ray at home, despite the fact that my favorite PC's display and my HDTV both have full HD (1,920 x 1,080) resolutions. Part of my hesitation is financial.

Most of my hesitation stems from the fear that, even though I'm still occasionally impressed by how good certain upconverted DVDs look on my TV, letting Blu-ray into my home will somehow guilt me into buying movies in the more expensive format. It wouldn't take much arm-twisting to convince me to buy "Watchmen" and "Iron Man" in

high-def, for instance. And after BD versions of "Lord of the Rings" and the first "Star Wars" trilogy hit the scene, I might as well take on a part-time job to fund the inevitable Blu-ray shopping spree.

I have other inducements to go high-def, too. My Netflix subscription could keep me supplied with BD rentals for a few dollars more per month than I pay now. I'm also intrigued by the fact that video-editing software I already own can put HD video on ordinary recordable DVDs. The enabling technology is the AVCHD (Advanced Video Codec High Definition) disc format, which is playable in most BD players. With AVCHD, I'll have a way to make BD-like discs at a fraction of the cost of actual BD-Rs. It will also give me an excuse to upgrade to a high-def camcorder before our next family trip.

Pioneering Performance

If I were to buy a BD burner, however, I would strongly consider Pioneer's BDR-2203 (known as the BDR-203 in its OEM [original equipment manufacturer] version). This SATA (Serial Advanced Technology Attachment) drive turned out to be faster at burning BDs than other drives I've tested, including ones that share its 8X advertised write speed.

The Pioneer wrote 20.5GB of mixed file types to a 25GB BD-R with a 4X write rating in just 24:27 (minutes:seconds). This is significant because BD write rates are finally approaching DVD's, at least in terms of gigabytes written per second. (BDs will probably always take several times longer to burn than DVDs.) Speaking of DVDs, the Pioneer wrote 4GB to a 4.7GB, 16X DVD+R in 7:20. The drive is rated as a 16X DVD burner and a 32X CD writer (Pioneer's site has more info).

The BDR-2203 comes with reasonable CyberLink burning and video-editing software, but it's the PowerDVD disc and media file playback application that stand out. The player apps bundled with most retail BD drives only play stereo versions of Blu-ray's advanced audio formats, meaning you have to shell out an extra \$50 or more to enable high-def surround sound. Kudos to Pioneer for including 5.1-channel audio support for not only Dolby Digital and DTS, but also BD formats Dolby Digital Plus, DTS-HD, and Dolby TrueHD, as well. ■



BDR-2203

\$249

Pioneer

(866) 214-1310

www.pioneerelectronics.com

Wi-Fi Internet Radio Stations By The Score

BLAINE FLAMIG

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BLAINE@SMARTCOMPUTING.COM



IRA Wi-Fi Internet Radio
\$149.99
Myine
(248) 591-0333
www.myine.com



**WiFi Wireless Internet Radio Tuner,
Home Theater Edition**
\$159.99
Aluratek
(866) 580-1978
aluratek.com

Internet radio is one of the best buys going. But “buy” isn’t entirely accurate. Listening to Internet radio doesn’t cost a cent if you have an Internet-connected computer and speakers. But even that description isn’t entirely accurate. Standalone Wi-Fi Internet radios, including Myine’s IRA Wi-Fi Internet Radio and Aluratek’s WiFi Wireless Internet Radio Tuner, Home Theater Edition, bypass the computer connection by tapping directly into a wireless router instead. Further, both radios compile and organize thousands of stations for you. I recently dialed into both radios.

IRA Wi-Fi Internet Radio

The IRA, or Internet Radio Adapter, looks, feels, and operates like a satellite radio receiver—not surprising considering Myine founder Jake Sigal’s previous experience includes producing XM Satellite Radio products for Delphi. Myine states that it creates products that “make music accessible to consumers with limited time or technological sophistication.” The IRA applies. The device took about two minutes to set up and start using.

The IRA sports a glossy-black frame surrounding a bright blue-and-white LCD. Built-in speakers and onboard buttons/controls are missing, however. Instead, the IRA connects to a home-theater system, standalone speaker, TV, etc., via RCA jacks to output music. A palm-sized remote controls all functions, including selecting stations, saving up to 40 favorites, and configuring network connections. Just don’t lose the remote, as the IRA is essentially useless without it. After plugging the IRA into an electrical outlet, the radio automatically detected available wireless networks. After entering my wireless router’s encryption key, I was set. Thereafter, the IRA automatically connected to my network.

The IRA organizes radio stations into Location, Genre, Popular, New Stations, and other categories and makes podcasts available from a separate menu. Although audio quality varied depending on the station, the majority

of stations I listened to hovered around CD-quality. Overall, the IRA’s no-fuss approach to performing one task is excellent.

WiFi Wireless Internet Radio Tuner, Home Theater Edition

Like the IRA, Aluratek’s WiFi Wireless Internet Radio Tuner comes loaded with 11,000-plus radio stations from 150 countries organized into categories. In fact, by all appearances, the radios use the same database to compile stations from and the same menu system to display them. The WiFi Wireless, however, adds some nice extras.

For starters, the WiFi Wireless provides an Ethernet port to connect to wired networks and a USB 2.0 port to plug in an external hard drive, flash drive, or MP3 player (MP3, WMA [Windows Media Audio], and WAV files supported) to play audio from. The radio even has a menu to help view and navigate files on an attached device. The radio can also wirelessly stream music stored on a PC via a home network. Additionally, Aluratek provides equalizer options and enough memory to save up to 500 favorites. Further, Aluratek offers a handy Web page (tinyurl.com/lk2udn) where you can use the radio’s individual ID number to search and save favorites to customized folders that will sync to the radio.

The WiFi Wireless relies on a remote to handle all functions and lacks a built-in speaker, using RCA jacks instead to connect to home theaters and speakers. Like the IRA, the WiFi Wireless automatically detected my home network and after entering my encryption key, auto connected to it thereafter.

Odds & Ends

Whereas the IRA looks like a computer peripheral, the jet-black WiFi Wireless looks more like a home appliance. Still, both radios are gorgeous and can find a place in conceivably any setting, although both radios’ screens are difficult to read about 6 feet or so away. You should also expect a slight lag when switching between stations as well as stations occasionally dropping out due to the nature of Wi-Fi connections. Ultimately, though, despite their differences in approach, both radios offer countless hours of diversified radio listening at a price that’s impossible to beat. ■

One-Button Scanning

HP Scanjet G3110

TARA SIMMONS BANTAM

SEND YOUR COMMENTS TO
TARA@SMARTCOMPUTING.COM

Some electronic devices are packed with bells and whistles that tempt you from the aisle of your local electronics store. And some are designed to steadfastly do their job well and forgo a bit of the glitz to land in the ever-appealing affordable price range. At just under \$100, the HP Scanjet G3110 is a solid scanner that can handle a variety of jobs without breaking the bank.

Setup of the G3110 only involved plugging in a couple cables, and installation of the included software was clear-cut and simple. After the relatively quick setup, beginning a scan is as easy as pressing one of the four available buttons: Scan, Copy (scan and send to an available printer), Scan To Email, or Scan To PDF.

Press a button, such as Scan To PDF, and you'll be presented with scanning options (such as creating a searchable PDF). Customizing the buttons through the HP Solution Center let me set new defaults and eliminate unnecessary steps for projects. For instance, to scan and upload a string of photos, I configured the Scan button to automatically assume the document was a photo, perform a Quick Scan, and open it in HP's included Photosmart photo-editing software. With a little tweaking, the buttons became one-touch convenient for a variety of tasks.

In my time using the G3110, I found the OCR (optical character recognition) feature to be very effective and surprisingly

handy. The ability to scan a paper and turn it into an editable Word document has numerous applications in any home office, from uploading and then updating a printed list of addresses to copying a form you want to tweak and reuse. It can handle documents up to 8.5 x 11 inches. Another plus I wasn't expecting was the ability to easily scan bulky objects, such as pages from a book. The adjustable lid let the scanner ably process pages from my thick family cookbook.

Scanning itself was a bit slow, even at lower resolutions. Scanning a document to PDF (Portable Document Format) at the default 300ppi (pixels per inch) took about 45 seconds on average, and scanning a 4- x 6-inch photo at that resolution took about 35 seconds. Quick Scan options boosted the speed, and I found myself using them frequently. Processing a strip of film or set of slides took the longest at a minute or more in most cases. On the plus side, scans were clear, and dust and scratch removal options helped get rid of some imperfections on photos and film.

I also appreciated that the transparent materials adapter, for film and slide scanning, rests securely in the lid of the scanner when not in use, so there was little chance I would lose it. You can scan a strip of film (up to five frames) or up to four 35mm slides at once and then select each slide/negative section separately, so it saves each as an individual file. The G3110 guesses the areas that make up each image, and it was frequently unable to accurately recognize individual pictures in a strip of film. Going back and selecting the correct area is simple, but the extra time it takes to do this combined with the slow scanning times means that, while this scanner can handle basic tasks, it's not the ideal machine for inputting all of your film or negatives.

If you have a project like that ahead of you, consider a scanner that's aimed at such tasks (take a look at the Canon CanoScan 5600F and the Epson Perfection V500 I covered in the February 2009 issue). Judging from the response I received regarding the photo scanners I reviewed in February, there are a significant number of you out there with big (or really, really big) slide and negative digitizing tasks on your hands. If that's the case for you, you may want to consider a slide scanning service. Readers have reported good results with services such as ScanCafe (www.scancafe.com), which will digitize 35mm slides or negatives for 29 cents each. Considering that professional-level scanners that can handle 20 or more slides at once can cost \$500 or more, using a reputable service such as ScanCafe or a local provider you trust for even 1,000 slides starts to look economical.

If, however, you only occasionally need to scan a photo and want a scanner that can handle day-to-day tasks well without cleaning out your wallet, take a look at the G3110. ■



Scanjet G3110
\$99.99
HP
(800) 752-0900
www.hp.com

Head-To-Head: Digital Audio Players

Pocket-Sized Entertainment

Over the past few years, expectations have been raised for DAPs (digital audio players). It used to be that audio playback capabilities were good enough, and all the other features were simply extras. These days, even the most basic player at least includes video and photo playback capabilities, and it's likely there's also an FM radio tuner and a built-in microphone for voice recording. More advanced digital audio players (which are sometimes called portable media players) pack built-in Wi-Fi, support for movies and TV

navigation menu and ease of use, so you can be prepared and walk down the DAP aisle with confidence.

Apple iPod Touch 16GB

The iPod touch is the digital audio player everyone wants to get their fingers on, and the reasons are clear. It offers the Apple Multi-Touch touchscreen (also seen on the iPhone) that responds to finger movements, such as glides, flicks, and pinches. The iPod touch has just a single button, which takes the



Apple iPod Touch 16GB
IMAGE COURTESY OF APPLE

SPECIFICATIONS:

Capacity: 16GB

Physical Dimensions:

4.1 x 2.4 x 0.33 inches
(4.05 ounces)

Screen Size: 3.5 inches

Battery Life*: Up to 36 hours of audio; six hours of video

Memory Type: Flash

*Approximate

shows, games, and personal information management features into a device no larger than an adult's hand.

However, not everyone needs to catch all six Rocky movies or an entire season of "The Sopranos" on a DAP. Some consumers are simply looking for motivation during a jog or an easy way to travel with more photos of their grandchildren. We looked at several DAPs with a broad range of features, so you'll have a better idea of which type of DAP is best for you. We also examined the quality of their audio, video, and photo playback capabilities, along with each player's

user back to the main menu, but the iPod touch provides an on-screen QWERTY keyboard when it's needed.

The iPod touch lets you download all types of content, such as music, movies, TV shows, and podcasts, along with applications, from the iTunes (www.apple.com/itunes) App Store. Supported audio formats include AAC (Advanced Audio Coding), protected AAC, MP3, Audible, Apple Lossless, AIFF (Audio Interchange File Format), and WAV. The iPod touch also features support for H.264 video and MPEG-4 (Moving Picture Experts Group-4) video in M4V (MPEG-4 part 2), MP4,

and MOV (Quick Time movie) file formats. Additionally, the iPod touch supports JPEG (Joint Photographic Experts Group), BMP (bitmap), GIF (Graphics Interchange Format), TIFF (Tagged Image File Format), PSD (Photoshop document; Mac only), and PNG (Portable Network Graphics) photo formats.

iTunes is required for the iPod touch, but it's a free download. Applications are software programs for your iPod touch. Like software applications for your computer, they serve different purposes and are divided into categories, such as Entertainment, Business, Finance, Healthcare & Fitness, Lifestyle, and Education. You can download applications that help you balance your checkbook, keep track of the number of calories you've eaten in a day, or let you catch a quick game of Sudoku.

The built-in Wi-Fi radio on the iPod touch adds several capabilities. When you are connected to the Internet, you have the ability to download multimedia and applications directly to your iPod touch through wireless access to iTunes and the App Store. (Connect quickly with a widget on the main menu.) With the combination of Wi-Fi and widgets located on the home screen, you can use the iPod touch to surf the Web, read and compose email messages (a feature that includes support for Microsoft Exchange and Web email accounts), map driving directions, and check the weather. The YouTube widget on the main menu lets you stream Internet videos.

When it comes to the basics, such as audio and video quality, the iPod touch excels. Video includes bright, natural colors, and the audio is clear, with a wide volume range that lacks noticeable distortion at either end. The iPod touch also includes a built-in speaker that (while it doesn't offer excellent audio quality) is useful. Finally, the iPod touch offers stereo Bluetooth audio streaming to accessories, such as Bluetooth-enabled headphones.

BUYING TIPS

- How you'll be using your digital audio player should be an important consideration when you purchase a DAP. If you're looking for a good gym partner, then find a device that's light and compact. To keep you entertained on long business trips, purchase a DAP with lots of multimedia capabilities (such as the ability to download and watch movies or videos).
- When you budget for a DAP, don't forget to factor in accessories. Headphones that come packaged with DAPs often aren't comfortable, so you may want to purchase those separately. Also, consider accessories, such as an adapter for your car, and a speaker dock.

In addition to the 16GB iPod touch, you can also purchase 8GB (\$229) and 32GB (\$399) versions.

Archos 2 8GB

The Archos 2 is a small, affordable device that includes all the basic elements of a digital audio player. It's only slightly larger than a lighter, which

the ability to display text and lyric files. To complement its 8GB of storage, the Archos 2 includes a slot for microSD and microSDHC (high capacity) cards. The Archos 2 also has a built-in microphone and voice-recording capabilities.

The Archos 2 has decent audio quality, but photo and video images lack clarity and detail. The interface, however, is easy to navigate, though it lacks finesse.



Archos 2 8GB

SPECIFICATIONS:

Capacity: 8GB
Physical Dimensions (HxWxD): 3.3 x 1.6 x 0.35 inches (1.8 ounces)
Screen Size: 1.8 inches
Battery Life*: 10 hours of audio; 4 hours of video
Memory Type: Flash

*Approximate



Creative Zen X-Fi with Wireless LAN 16GB

SPECIFICATIONS:

Capacity: 16GB
Physical Dimensions: 3.3 x 2.2 x 0.5 inches (2.4 ounces)
Screen Size: 2.5 inches
Battery Life*: 36 hours of audio; 5 hours of video
Memory Type: Flash

*Approximate

makes it a great companion for the gym; especially because it also includes FM radio. Additionally, the Archos 2 features audio (unprotected MP3 and WMA [Windows Media Audio] files), video (AVI [Audio-Video Interleaved]), and photo (JPEG) playback, along with

Creative Zen X-Fi With Wireless LAN 16GB

The Creative Zen X-Fi with Wireless LAN has a trio of headlining features, including its built-in Wi-Fi capabilities, access to instant messenger programs,

and Creative's audio-enhancing technology. If you have Internet access and a wireless network, the Zen X-Fi can connect to the network and download content from the Creative MediaBox. Creative MediaBox is a bank of multimedia you can download, but the majority of MediaBox's content is podcasts, and it lacks a selection of music and videos.

You can use the Zen X-Fi to chat with friends through Yahoo! Messenger and Windows Live Messenger by creating a chat profile through Creative's Web site. The keyboard might discourage some from maximizing this feature, because each key on the keypad has three letters (including both uppercase and lowercase) and a number assigned to it. If you want to enter the numeral 5 (for example), you will have to toggle through j, k, l, J, K, L to get to it. It's not a big deal for quick messages, but if you want to enter a long message or the password to your wireless router, it can be a painfully tedious process.

Creative incorporated two new technologies called the X-Fi Crystalizer and X-Fi Expand. X-Fi Crystalizer is designed to improve the audio elements that have been limited or impaired during the compression process. This generally applies to the bass tones, along with high and mid tones, and it is designed to make the overall sound deeper and richer. The X-Fi Expand is engineered to make the audio sound more three-dimensional than audio without X-Fi Expand technology. With X-Fi Expand, the audio sounds as if it's coming toward you, as it would in a concert setting.

In addition to a wide variety of audio file formats (MP3, WMA,

unprotected AAC, WAV, Audible 4), the Zen X-Fi also supports a broad range of photo (JPEG, BMP, GIF, PNG, TIFF) and video playback (M-JPEG, WMV9 [Windows Media Video 9], MPEG4-SP [Simple Profile], DivX 4/5, XviD). Also, FM radio is included with the Zen X-Fi, as are voice recording and organizational applications (calendar, contacts list, and task list).

The Zen X-Fi, which is approximately the height and width of a credit card (and slightly thicker),

offers great audio quality, thanks to X-Fi Crystalizer and X-Fi Expand technologies. The video and photo quality on the Zen X-Fi is as good as the audio quality. While its features are top-notch, the Zen X-Fi is not easy to use. You need to use its buttons to navigate the menu, but there is no label or clear indication of which button represents each function on the device.

The Creative Zen X-Fi with Wireless LAN is also available with 32GB (\$229.99) of storage capacity.



iRiver SPINN

SPECIFICATIONS:

Capacity: 4GB

Physical Dimensions: 3.9 x 2 x 0.42 inches (2.47 ounces)

Screen Size: 3.3 inches

Battery Life*: Up to 24 hours of audio; 5 hours of video

Memory Type: Flash





















*Approximate

iRiver SPINN

The iRiver SPINN is named for its spinning wheel controller (called a spindle) that helps you scroll through the SPINN's menu and content. This makes the design unique in the digital audio player market. In addition to the spinning wheel, it also includes a haptic feedback touchscreen that vibrates with each touch command. The inclusion of the touchscreen and the well-designed menu make the SPINN easy to navigate and user-friendly.

The SPINN, which is about the size of a driver's license, offers audio (MP3, WMA, OGG [Ogg Vorbis], ASF [Advanced Systems Format], FLAC [Free Lossless Audio Codec], and APE), video (MPEG-4 SP, WMV9 SP, and XviD SP), and photo (JPEG, BMP, PNG, and GIF) playback, along with FM radio and voice recording. It also has preloaded games and support for text files. Additionally, it features Bluetooth connectivity so you can communicate with accessories, such as Bluetooth-enabled earphones.

PRODUCT INFORMATION

	Price	Company	Contact Info	URL	Notable Features	Systems Supported
Apple iPod Touch 16GB	\$299	Apple	(800) 692-7753	www.apple.com	Built-in Wi-Fi; Thousands of downloadable applications; Supports movies and TV shows	 Win XP  Win Vista  Mac
Archos 2 8GB	\$59	Archos	(877) 300-8879	www.archos.com	Compact size; Expandable storage; Supports lyric files	 98  Me  Win Vista  Win XP  Linux  Mac
Creative Zen X-Fi with Wireless LAN 16GB	\$179.99	Creative	Online only	www.creative.com	Built-in Wi-Fi; X-Fi technology; Yahoo! Messenger and Windows Live Messenger	 Win Vista  Win XP
iRiver SPINN 4GB	\$169.99	iRiver	(562) 758-6393	www.iriverinc.com	Spindle wheel; Haptic touch feedback	 Win Vista  Win XP  Win 2000
Samsung P3 8GB	\$149.99	Samsung	(800) 726-7864	www.samsung.com	DNSe 3.0 technology; Several customizable options; Preloaded games	 Win Vista  Win XP
Sansa Fuze 4GB	\$99.99	SanDisk	(866) 726-3475	www.sansa.com	Compact size; Easy to use; Expandable Storage	 Win Vista  Win XP  Linux  Mac

The SPINN has an AMOLED (active matrix organic light-emitting diode) display, which, according to iRiver, allows for sharp details and an ultra-bright screen. To our eyes, the brightness made colors appear somewhat unnatural. The audio quality of the SPINN is equal to its peers in the high-end device price range, and it has a good volume range without a lot of noticeable audio distortion on either end of the volume range. The video quality is also on the same level as other high-end devices.

You can also purchase the 8GB (\$199.99) iRiver SPINN.

Samsung P3

The Samsung P3 is an attractive device, but its beauty isn't just skin deep. It includes audio (MP3, WMA, OGG, AAC, FLAC, WAV, ASF), video (MPEG4, WMV, H.264, ASF, RMVB [RealMedia Variable Bitrate]), photo (JPEG, BMP, PNG), and FM radio playback, along with support for Bluetooth technology and podcasts (Samsung refers to these as datacasts). Additionally, the P3 also offers voice recording and text viewing capabilities. You can access each of these features through widgets on the P3's main menu. For urban dwellers, there is also a widget that provides preloaded subway maps for cities, such as Vancouver, Toronto, New York, Chicago, and Mexico City, and it offers two world clocks to help you keep track of what time it is in your Hong Kong branch, for example.

The touchscreen on the P3 features haptic feedback, which gives you a slight vibration for each touch command. The screen is designed to be scratch-resistant, and it provides vibrant, natural color tones for photos and videos. Several preloaded games on the P3 take advantage of the touchscreen and test your finger-eye coordination.

The P3 provides excellent audio quality and includes Samsung's DNSe 3.0 technology. According to Samsung,

DNSe is engineered to enhance the natural highs and lows for songs in order to create a three-dimensional sound. With DNSe, you can choose between several modes, including automatic, normal, studio, rock, classical, jazz, and ballad, so you can tailor your device to best complement your music selection. You can also choose sound effects, such as Street Mode, Audio Upscaler, and VibeWoofer (which vibrates the player to match the beat of the music). Finally, the P3 lets you add songs to the built-in alarm clock, so you can wake up to the beat of your favorite tune.

The P3 is packed with features and options that let you customize your device and your music so that it best suits your tastes. The details it offers, such as the Adobe Flash player widget, set it apart from other digital audio players.

A 16GB Samsung P3 (\$199.99) is also available.



Samsung P3

SPECIFICATIONS:

Capacity: 8GB

Physical Dimensions: 4.02 x 2.07 x 0.39 inches (3.36 ounces)

Screen Size: 3 inches

Battery Life*: Up to 30 hours of audio; 5 hours of video

Supported Systems: Windows XP/Vista

Memory Type: Flash

*Approximate



Sansa Fuze 4GB

SPECIFICATIONS:

Capacity: 4GB

Physical Dimensions: 3.1 x 1.9 x 0.3 inches (2.1 ounces)

Screen Size: 1.9 inches

Battery Life*: Up to 24 hours of audio; 5 hours of video

Memory Type: Flash

*Approximate

Sansa Fuze 4GB

This small player packs a lot of features into its diminutive size. It offers audio, video, photo, and FM radio playback, along with voice recording capabilities and a microSD and microSDHC card slot for extra storage. It also offers support for a variety of file formats, including MP3, OGG, FLAC, WMA, secure WMA, WAV, Audible, and MPEG4. The carousel menu, which is controlled with a click wheel, is easy to navigate and offers an aesthetically appealing design.

Although the screen is small, it offers high-quality images for photos and video, with crisp, clear images and natural colors. The audio quality is decent, too. For around \$100, the Sansa Fuze is a good device that's ultra-portable and won't empty your wallet.

You can also purchase the 2GB (\$79.99) and 8GB (\$119.99) Sansa Fuze. ■

BY TESSA WARNER BRENNEMAN

Monitor & Manage Children's Computer Use McAfee Family Protection

\$39.99 (one year; up to three PCs and 10 users) | McAfee
(866) 622-3911 | www.mcafee.com



In the same vein as Net Nanny and other full-featured parental control programs, McAfee Family Protection offers a wide array of options and access methods. Installation is quick and easy (given a few caveats noted later), and a 30-day free trial lets you decide if the program is right for your situation.

Getting Started

To begin using McAfee Family Protection, you sign up for an account at www.mcafee.com and then request either the free trial or a purchase. Once you download and run the program, Family Protection connects to the Internet and prepares the program for usage. We liked that we didn't have to shut down other programs while it was installing. However, we experienced a glitch that froze the install (or at least made it excessively long—we gave up and rebooted) when it tried to communicate.

We guessed (but did not confirm) that the problem was likely a free, unused trial of another McAfee program, registered on our test system under a different McAfee login. We upgraded the free trial to a full subscription, and presto! Family Protection was able to communicate. Consequently, if you have any free, unused, or expired trials of McAfee products that came with your PC, either uninstall or upgrade them before you install Family Protection. If you already have a McAfee login, use it unless you want that login blocked



Key Features: Broad-based parental control software lets an Administrator manage children's (or other users') online and PC access, including programs, access time, Internet sites, social networking, and communications.

from Administrator privileges. (Family Protection uses a single McAfee login for Administrator access, and you can't give a new user Administrator privileges.)

One minor annoyance was that Family Protection starts up with the Administrator's access restricted. This seems an unnecessary precaution. It is not clearly noted anywhere, so we were temporarily stymied. However, once we opened Family Protection and logged in, we were able to unblock the Administrator account, and it stayed that way, even after reboot.

How It Works

Family Protection offers a broad array of customization options, and we liked its flexibility. You can filter, block, or record visitation of Web sites (and YouTube videos) in numerous categories, create custom site or keyword lists, or employ any combination

thereof. You can set program access and usage time limits and have it record sensitive information revealed during social networking on sites such as Facebook or MySpace. You can also block users from sending or responding to emails to unknown individuals and block Web-based email (which it cannot filter at the user level). All of these features are accessed through a single, well-organized, and intuitive interface.

The Administrator can set up email or text alerts to be delivered when certain activities occur. Text alerts in particular are great for time-sensitive situations, such as a child needing a blocked Web site for homework or trying to enter dangerous territory. The Administrator can also adjust settings remotely by logging in to his McAfee account at www.mcafeefamilyprotection.com, where he'll work with an interface like the one on his PC.

On a final note, Family Protection logs instant messaging conversations by default, even in those with full access. You can disable this entirely, but it's handy for more than child safety. For example, if you engage in instant message conversations with co-workers, McAfee will log them and you can reference them later. Overall, Family Protection offers good value for the money—it is a significant enhancement to the Parental Control features included with other McAfee security products. ■

BY JENNIFER FARWELL

Annotate As You Browse

iCyte

Free | iCyte
(212) 710-5164 | www.icyte.com



WinXP



Vista



Mac



Linux

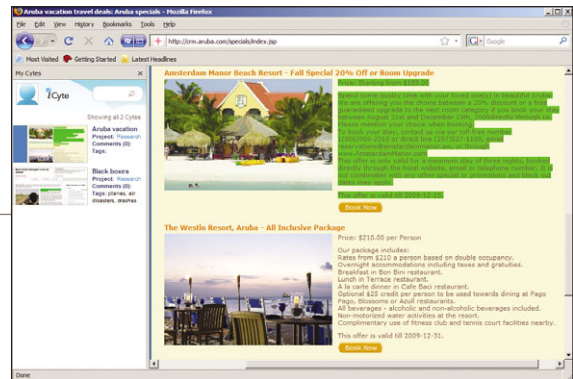
This browser add-in (recommended for Firefox; also works with Internet Explorer) lets you highlight text on a Web page (just as you would on paper with a highlighting pen) and click a button in the browser toolbar to save it to a “project.” You can then access these projects, with both archived and live views of the page, through your personal iCyte page. As you browse, you can continue adding annotations to existing projects or create new ones as you come across unrelated but useful text.

Click the View Cytes toolbar button to view your iCyte work in an Internet Explorer-style history pane. Optionally, head to your iCyte user page to manage your iCyte projects. Change them from private to public or vice versa (they are

Key Features: Browser-based annotation tool lets you highlight, tag, and comment on text on Web pages and then manage those citations for reference and sharing.

private by default), share projects with others for collaborative purposes, add reminder notes about the project, and more.

From your user page, click My View to view cited pages; sort them by date or other criteria; and change, move, email, or delete pages. (Place your mouse to the far-right side of the citation title to access the Options icon for a specific page. The main



Options icon performs actions on the entire project group.) For anyone who performs Internet research—no matter the reason, this is a truly nifty tool. ■

BY JENNIFER FARWELL

Gather & Organize Genealogy Data

Legacy Family Tree 7.0 Deluxe Edition

\$29.95 | Millennia
(800) 753-3453 | www.legacyfamilytree.com



Windows 2000



WinXP



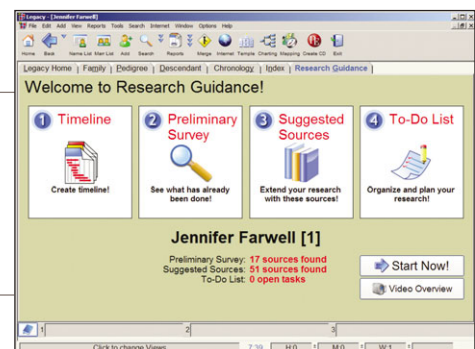
Researching one's family tree is, for many, one of the most valuable benefits of the Internet. Like never before, budding genealogists can search county, city, church, and other records online; discover unknown ancestors; and connect with distant relatives. However, amassing the data into a structured format is laborious without a genealogy program such as Legacy Family Tree.

Legacy Family Tree is both powerful and user-friendly, a combination of features often sadly lacking in some programs. It sports a well-organized interface with buttons for functions ranging from automated charting to location mapping. (Legacy Family

Key Features: Feature-rich genealogy software includes powerful search tools, mapping capabilities, and more; it can import data from several other genealogy programs.

Tree uses Microsoft Virtual Earth to plot important locations in ancestors' lives, helping you determine migration patterns.)

A tabbed interface helps structure data, such as by Family, Pedigree, Descendant, and Chronology. One great tab is Research Guidance, which helps you build a timeline for searches and lists a variety of online genealogy resources to help with research.



Legacy Family Tree offers a Standard, free edition; a good way to test it before you purchase. (The Deluxe edition opens full access to all functions.) Setup is easy and helpful and offers to link you to a 45-minute tutorial. (Vista users, don't change the setup defaults.) ■

BY JENNIFER FARWELL

No Windows, No Problem

Data Rescue PC3

\$99 | Prosoft
(877) 477-6763 | www.prosofteng.com

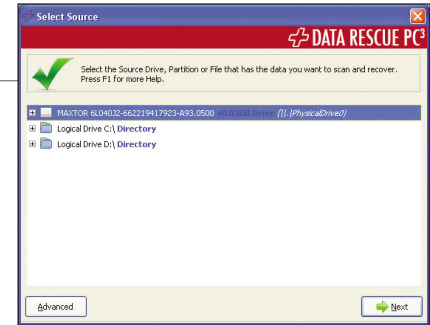


Like its name would suggest, Data Rescue PC3 is an application designed to recover data from your PC when the files on your hard drive have been lost or damaged. The primary appeal of Data Rescue is that Prosoft includes an application disc that works even if Windows won't boot because of a system crash. If errors, a power failure, or a virus corrupt your copy of Windows or the computer's hard drive, you may still be able to reclaim files. Data Rescue PC also gives you the ability to copy all the files from a drive you think may be failing, so you have a backup on an external storage device, a second internal hard drive, or another storage location on your network.

Key Features: Data Rescue PC3 allows you to recover and back up files from a troubled PC.

When using Data Rescue as a bootup CD, you can select a Standard mode with step-by-step directions or an Advanced mode, which lets you view more detailed file information. After selecting the drive and allowing time for the scan to finish, we picked our Destination drive, and the files copied over without a hitch.

When we installed Data Rescue on our test PC, it offered us a Select Source window where we could select any of the storage drives (and the associated partitions) connected to our computer. Once the drive was



scanned, we could navigate the folder directory or search the files for specific file types to clone onto our external hard drive. ■

BY NATHAN LAKE

Panda Power

Internet Security 2010

Pricing starts at \$35.97 for six months of protection on one PC | Panda Security
(818) 543-6901 | www.pandasecurity.com



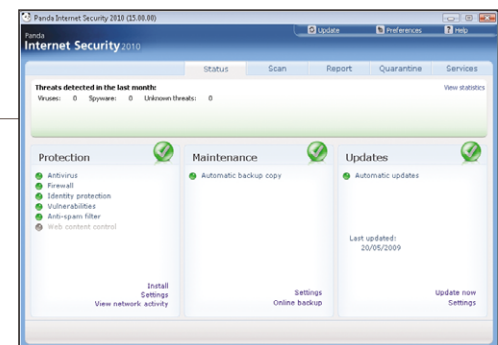
Panda Internet Security 2010 is a suite of security tools that includes protection against pretty much every type of Internet threat we can think of, including viruses, spyware, rootkits, and online fraud.

Internet Security 2010 installed and updated quickly; it took around three minutes to install the application and two minutes to update with the latest anti-malware definitions. Panda Security designed the interface with five main tabs: Status, Scan, Report, Quarantine, and Services. With the simple interface, it's easy to locate and understand the security suite's complex features. For example, Panda Security color codes your PC's security for Antivirus, Firewall, Identity Protection, Vulnerabilities, and Anti-spam Filter.

Key Features: Panda Internet Security 2010 is a complete security suite that protects you from all types of malware.

and Anti-Spam Filter—green is secure, yellow represents risk, and red means danger.

You can click each security service to manage and edit the way each protection runs on your PC. For example, to make an exception in the Firewall, we clicked the Firewall option, clicked the Settings button next to You Can Specify Which Programs Can Access The Internet to customize our permissions for each application. We like that Panda Security includes a link in the Service tab to directly email Tech Support, and when we asked a question, we received a response



in less than a minute. Finally, Panda's Collective Intelligence approach, a database that adjusts in real time to the detected malware from other users, lets Internet Security 2010 respond faster to new viruses and spyware. ■

BY NATHAN LAKE

Microsoft News

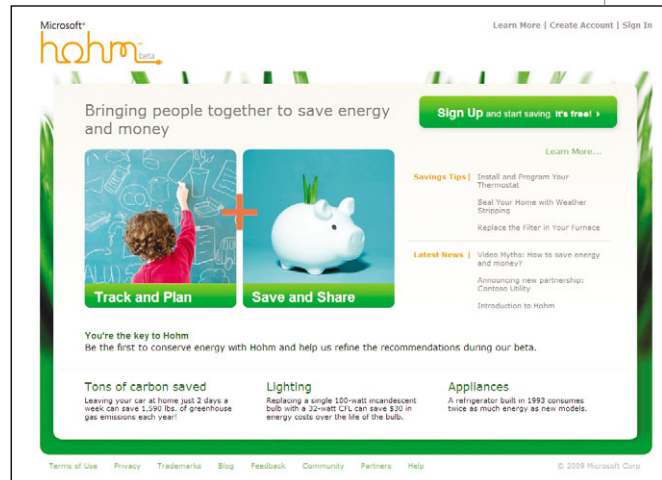
Microsoft Launches Energy Conservation Web Site

Microsoft has launched Microsoft Hohm (www.microsoft-hohm.com), a free Web application that aims to help consumers better understand their home energy usage and find ways to save money on energy bills.

Visitors to Microsoft Hohm can access conservation-related articles, enter a ZIP code to view information about local energy consumption patterns, and fill out a detailed home profile to receive a customized report of energy-saving recommendations. People can enter information from utility bills to track energy consumption, but in the future, customers of power utilities that have partnered with Microsoft (there are only four so far) should be able to automatically upload their usage data.

Microsoft Retail Stores Set For Fall Debut

The first batch of Microsoft's recently announced retail stores look set to debut just in time for the all-important holiday shopping season (not to mention the Windows 7 launch on Oct. 22). Some will likely be within a stone's throw of rival Apple stores—as Microsoft's Chief Operating Officer Kevin Turner told attendees at the company's Worldwide Partner Conference in New Orleans, “stay tuned, because we're going to have some retail stores opened up that are opened up right next door to Apple stores this fall.”



The Microsoft Hohm Web site is designed to help users save energy in their homes.

Dell Selling Downloadable Microsoft Software

Until recently, the only place to get the instant gratification of (legally) purchasing Microsoft software for download was at the company's own online store. Now, those looking to buy a copy of Word without a trip to the store (or waiting for a package to arrive by mail) can do so at Dell's Download Store (www.dell.com/downloads), the first independent site authorized to sell downloadable Microsoft products.

Windows News

Windows 7 Gets Redesigned Packaging, Family Pack

Anyone who bought a retail copy of Windows Vista probably recalls that the plastic case features a cumbersome swing-out hinge design. It proved un-intuitive enough that Microsoft actually posted online instructions for opening the packaging.

The packaging for Windows 7 will look similar to Vista's but will feature a more conventional design that opens like a standard DVD case. Microsoft says the Win7 case is recyclable as well as 37% lighter than its predecessor.

Microsoft also plans to address the needs of multiple PC households by offering a Windows operating system “family pack” for the first time. The family pack will retail for \$149.99, and it will allow buyers to upgrade up to three PCs (running Windows XP or Vista) to Windows 7 Home Premium.

Windows Marketplace For Mobile To Support Older Devices

Microsoft says that its Windows Marketplace for Mobile, which arrives this fall on new phones running the forthcoming Windows Mobile 6.5 operating system, will soon be available for many older devices, as well. The online application store, which will let users browse, purchase, and download programs directly to their phones, will be available to those with Windows Mobile 6.0 or 6.1 devices by the end of this year.

Windows Tips

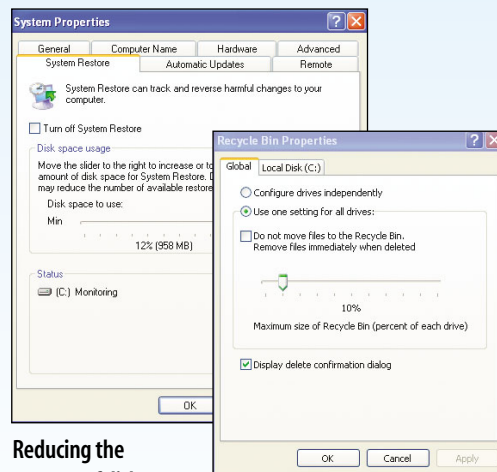
Take Back Reserved Drive Space In WinXP

When an older Windows XP system starts running low on drive space, a quick and easy way to free up some storage capacity is to reduce the amount set aside for the Windows Recycle Bin and System Restore features. These two items reserve 10% and 12% of a hard drive's space, respectively, so together they put nearly a quarter of your total storage capacity out of reach—if you can live with a bit less space for deleted files and restore points, more will be available for your own use.

To adjust Recycle Bin storage settings, right-click the Recycle Bin Desktop icon, select Properties, and then drag the slider to the left to reduce the amount of space reserved. If you have multiple hard drives, you can select the Configure Drives Independently radio button and then adjust the slider on individual drive tabs. (Hint: Even if you have just one drive, clicking the drive's tab will let you see the actual amount of space reserved in megabytes or gigabytes—not simply as a percentage.)

To adjust System Restore settings, right-click My Computer from the Desktop or Start menu, click Properties, and then click the System Restore tab. Again, move the slider left to reduce the amount of reserved space downward. (System Restore requires at least 200MB of drive space to function.)

Depending on how aggressive you are, reducing the Recycle Bin and System Restore storage reserves can net you several gigabytes of extra space. But before making any changes, be sure you won't need any existing deleted files or restore points, because some (particularly the older ones) may be erased as a result.



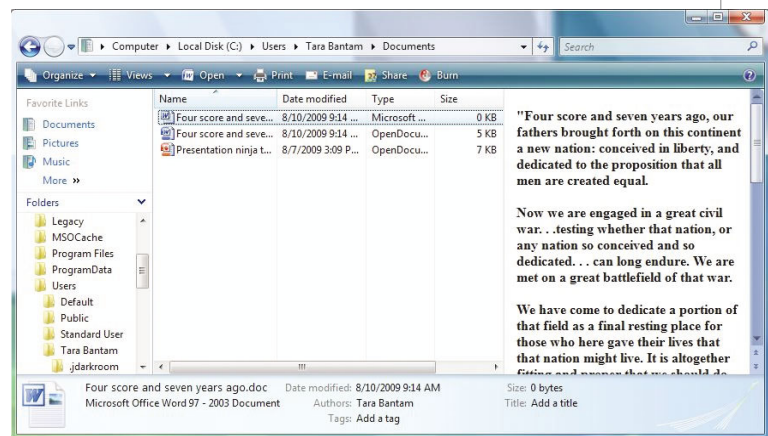
Reducing the amount of disk space automatically reserved by WinXP's System Restore and Recycle Bin can free up capacity when storage is tight.

Glimpse Documents With Vista's Preview Pane

Thumbnail views let you conveniently identify photos or videos without having to first open the files, but Vista's Preview pane can give you a similar benefit for many document file types, including PDFs and Microsoft Word, Excel, and PowerPoint files (and OpenOffice.org files, too).

To enable the Preview pane, open an Explorer window and choose a folder, then click Organize, Layout, and finally, Preview Pane. The Preview pane will initially appear as a narrow column along the right edge of the Explorer window. You can click and drag its left border to enlarge it.

Now when you highlight a document, you can examine it from the Preview pane without having to run its application. (For large files, it may take a few seconds for the preview to appear.) You can use the Preview pane's scroll bars to view the entire contents of text or spreadsheet documents or to browse individual slides or pages in presentation or PDF files. The Preview pane will also display an embedded player for Windows Media Audio or Video files.



Vista's Preview pane lets you view document files without opening them first.



Windows XP

Choose Default Programs

Ahhh . . . convenience. Windows XP is no longer a cutting-edge operating system, but when its little usability touches make things go more smoothly, we simply feel more productive.

It wasn't always the case that you could launch an application by double-clicking a file, such as a JPEG (Joint Photographic Experts Group) photo or a DOC manuscript. Back before it ever occurred to us to care whether neighbor kids trod upon our lawns, let alone what "roughage" was, we had to fire up a program (by typing a DOS command, by crikey!) and then scout around for a file to open with it. Today's users have it *easy*.

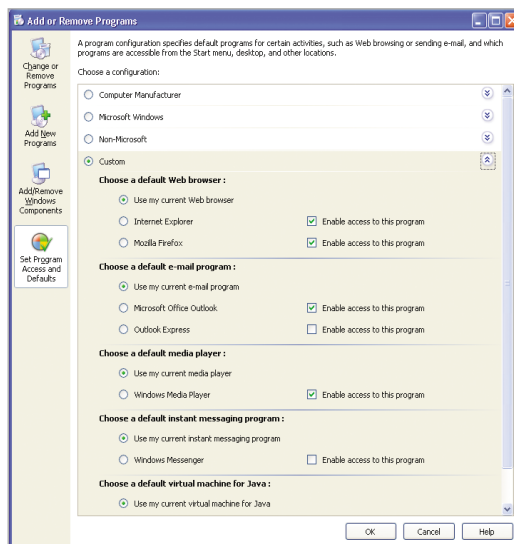
On the other hand, what do you do when you double-click a file and it opens the wrong app? Say you've installed a new photo editor, just to try it out, and now all your photos launch it instead of Adobe Photoshop Elements.

One inelegant but effective way to correct the issue is to uninstall the new program. That method won't let you give it a fair shake, however, and it may keep you from discovering that you really do like the new software after you get to know it.

A better way to change things back to the way they were is to designate which applications should open particular types of files, such as MP3s, when you double-click them. We'll tell you how to do this, as well as how to open a file with an alternative application without disrupting its association with your favorite program.

Getting Your Old App Back

Some programs check whether they're your go-to app for a particular file type or activity. For instance, if you install a different browser and then open your old one, it will probably ask you whether it should be the default. You can usually specify whether you want to be pestered with that question ever again.



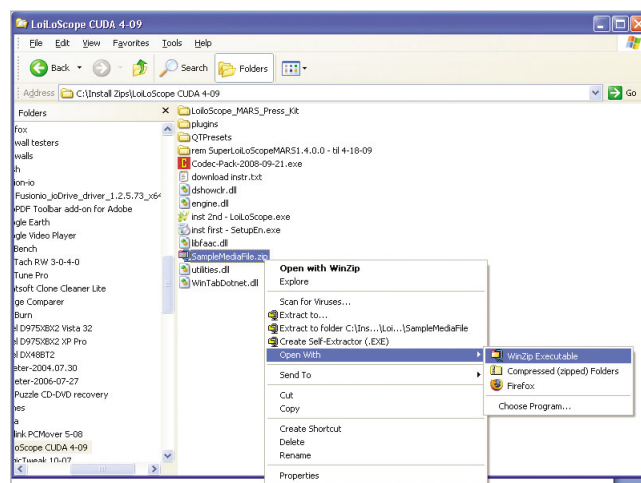
WinXP SP1 included Set Program Access And Defaults to satisfy customer demand.

Also, major multimedia titles, office suites, and file compression software may ask you during installation which file types should trigger their launch.

Set program access and defaults. WinXP with Service Pack 1 or later has a mildly useful addition to Add Or Remove Programs. To use it, click Start, Control Panel, Add Or Remove Programs, and Set Program Access And Defaults.

Here, you'll find preset configurations, including Computer Manufacturer, Microsoft Windows, Non-Microsoft, and Custom. Click the Custom preset's down-arrow icon to see five major application categories; namely, browsers, email clients, media players, instant messengers, and Java virtual machines.

Here, you can specify the programs you want to use by default, if Windows recognizes their names. To use an unlisted app, launch it, enable its own setting as the new default, and then in the Set Program Access And Defaults' Custom menu, click its Use My Current box. For best



The Open With option's mini-menu may have the app you're looking for.

results, restart your PC immediately after you install a new browser or other app.

Open With. An older but more comprehensive approach is to right-click a file and select Open With. We say that it's more comprehensive because you can adjust the file associations for any application, not just those in a handful of categories. In some cases, you might need to hold down the SHIFT key as you right-click to make the Open With selection appear; sometimes it won't show up at all.

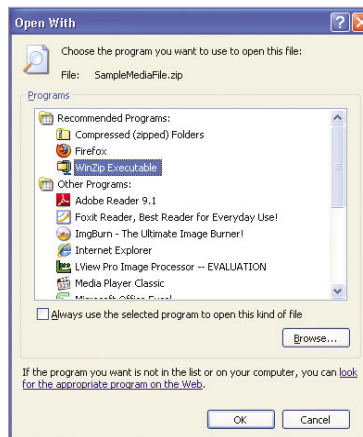
Open With conjures up a short menu of apps that Windows thinks might be able to access the file, although it occasionally guesses wrong. Click the program you want to use. This is a one-shot deal, and it won't permanently change the default application for that type of file.

On the other hand, if you don't see the desired app on the list, click Choose Program to summon the Open With settings panel. There will be a much longer list of possible applications to use to access the file, even if most of them won't actually work. Windows plops its recommended apps at the top of the heap, which can spare you some scrolling. But before you select one of the programs and click OK, or simply double-click it, read the "Temporary Associations" sidebar in this article about making the file association semipermanent or ducking such a commitment.

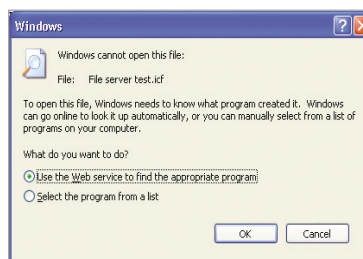
If you would rather use an obscure program of which poor, sheltered WinXP has

never heard, click Browse. The C:\PROGRAM FILES folder will surface. Find your application's folder (if you habitually install software to a different directory, look there), double-click it, and then double-click the .EXE file that starts the program you want to use. The app will appear in Open With's Recommended list, already highlighted. Click OK.

Open With is tied to an even more in-depth tool that lets you set defaults for a whole host of file extensions. Click Start, click Control Panel, and double-click Folder Options (in Classic view), and then click File Types. Scroll down the list, select a file extension, and click Change.



The checkbox labeled Always Use The Selected Program To Open This Kind Of File sets the default application for a particular file type.



If WinXP doesn't recognize a file format, you can choose an application from the Open With list, take your chances on Microsoft's online lookup, or identify the file extension on Filext.com.

Unrecognized Files

If you double-click a file with an extension that WinXP and its currently installed applications don't recognize, such as .ICF, you'll get a Windows Cannot Open This File error message with a couple of options. Click the Select The Program From A List button and OK to launch the Open With file association list described above.

If you're feeling lucky, leave the default first button selected and click OK. Microsoft's online Windows File Association search tool sometimes leads to an application that can handle your file type. There's a much more thorough file extension lookup tool at Filext.com, however. ■

BY MARTY SEMS

Temporary Associations

You want a particular file. And you want it your way: opened with a particular piece of software. At the moment, nothing else will do.

Of course, in the back of your mind, you realize that it might not be such a good idea to make the arrangement permanent. Sure, the file and the program may seem made for each other now, but what of their compatibility as version numbers change over the years? What if a more responsive program comes along with tempting, new

features? Can you in good conscience force your file to forsake all others, forever and ever?

When you right-click a file and select Open With and Choose Program, there's an important checkbox under the Programs list. If Always Use The Selected Program To Open This Kind Of File is enabled, whichever app you choose will become the new default for files with that extension, such as .ZIP or .TXT. Uncheck the box, and you can use any program you like without worrying

about the consequences. (If you accidentally make the wrong app the new default, use Open With again to select your preferred program.)

Mind you, you can also launch an application and then click File and Open to access a file, just like in the olden days. When you open a file this way, it won't rearrange its association with another program. But if the default application gets jealous and starts to cause errors later on . . . you're on your own. ■



Windows Vista

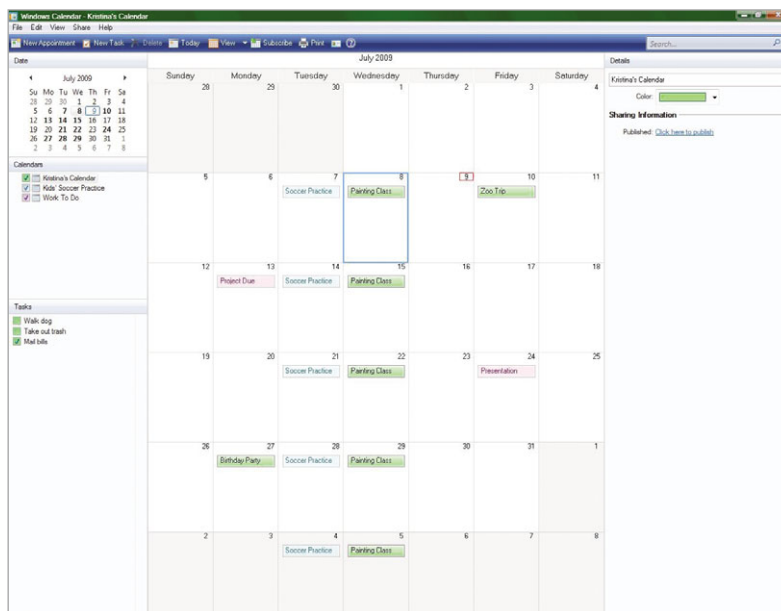
Get Organized With Windows Calendar & Contacts

You don't need to be reminded of how busy your life can become with multiple activities to manage, tasks to complete, and friends and family members to connect with. Balancing your daily schedule can be a challenging experience, especially if you don't have an organized method to do

To access your calendar, go to the Start button, mouse over All Programs, and locate Windows Calendar. The calendar is split into three separate sections. The left section contains a mini calendar that is used to navigate among months and years. Below the mini calendar is a list of the personal calendars you've created, and underneath that is your personalized task list. The middle section contains your calendar. You can change the view of your calendar by clicking View and choosing Day, Work Week, Week, or Month. The third section is titled Details. This is where you will customize your appointments and tasks by assigning dates and locations, setting reminders, and more.

Create an appointment. To create a new appointment, event, or activity, simply click New Appointment, found on the top-left portion of the page. In the Details section, give your appointment or event a name, such as Painting Class. You have the option of filling in the Location field and a Web site address. Under Appointment Information, choose a date for your event by using the drop-down calendar and designate a time by typing it in the field or clicking the Up and Down arrows. If your event is recurring, such as a weekly painting class, you can set the event to repeat periodically using the Recurrence option. Use the drop-down box to choose Every Day, Weekly, Monthly, or Yearly.

The Advanced option allows you to set a start and end date for recurring events. For example, if your Wednesday painting class begins in October and ends in November, you can place an appointment on every Wednesday until the end of November in one fell swoop. The Reminder section allows you to set a time for Windows Calendar to remind you of the upcoming event. You can choose to be reminded of the event as far in advance as two weeks or as soon as the event starts. The Participants section allows you to invite friends and family to the event via email, using your Windows Contacts address book, an application we will highlight later in the



With Windows Calendar, you can organize all of your appointments and keep track of all the tasks on your to-do list.

so. But Windows Vista has two tools that can help you get organized and stay in touch: Windows Calendar and Windows Contacts. We'll show you the basics of using each application.

Windows Calendar

Windows Calendar is an easy-to-use application that can help you keep track of your daily to-dos and coordinate schedules with family members or co-workers. You can create appointments or activities, organize a task list, and even share your calendar with others.

article. To edit your appointments, simply double-click the item on your calendar and change the information in the Details section.

Create a task. Crossing jobs off of a task list is a great way to stay motivated. To add a job to your task list, click New Task on the top menu bar. In the Details section, give your task a name, such as Walk Dog, and assign a start date and/or due date. Set a reminder if you wish and look to the Tasks section on the left to see that your new task has been added to the list. When you've completed a task, check it off your list by clicking the corresponding box and remove it by right-clicking and choosing Delete.

Create multiple calendars. You can create multiple calendars and color-code events to associate them with different calendars. This can be useful if you want to have separate calendars for work events and family events or to share your calendar with the family members or co-workers who also use your computer. With multiple calendars, they can add their own color-coded events to your calendar so that everyone can coordinate schedules. To add a new calendar, go to the File menu and choose New Calendar. In the left section, you'll see your new calendar is listed under Calendars. In the Details section, name your new calendar and color-code it by using the Color drop-down list. You can view all of your calendars simultaneously, or you can compare single calendars by clicking the checkbox next to each calendar's name in the left section.

The screenshot shows the 'Details' window for an appointment. The title is 'Team Fun Night'. The location is 'Joe's Pizza 1234 56 Street'. The calendar is set to 'Kids' Soccer Practice'. The start date is 7/18/2009 at 6:00 PM, and the end date is 7/18/2009 at 7:30 PM. The recurrence is set to 'None'. The reminder is set to 'None'. The participants section is empty. The notes section contains the text: '* Bring soccer jersey to be signed by other players'.

To create an appointment in the Windows Calendar application, simply fill in relevant information about your event in the Details section.

Windows Contacts

As an alternative to your tattered paper address book, Windows Contacts gives you an uncluttered view of your friends' and family members' contact information. When you add a new contact, you can include information about their home and work locations, names of their spouse and children, and their anniversary date and even upload a picture. Click Start, All Programs, and Windows Contacts to get started.

Create a contact. Click New Contact on the top menu. Fill in your contact's name and email address and work through the Home, Work, and Family tabs to fill in other relevant information about your contact.

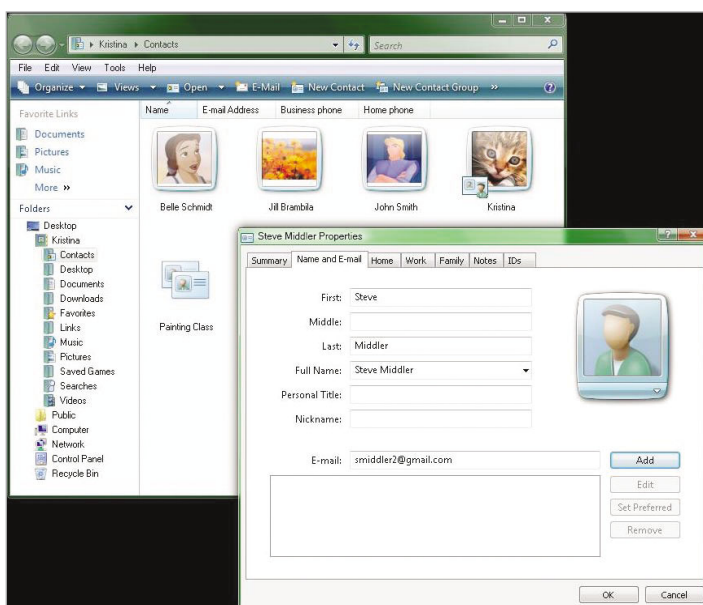
Create a contact group. Also known as a mailing list, a Contact Group allows you to easily send email to an entire group of people. For example, you could create a Contact Group that includes contacts for all the students in your painting class. When you want to send the same message to every student, you can simply click the Contact Group and select E-Mail from the top menu. To create a Contact Group, click the New Contact Group button

on the top menu. In the Properties box, name your group and add contacts either by clicking the Add To Contact Group button, which will allow you to select people from your current address book list, or by clicking Create New Contact, which will allow you to input new contacts that aren't already on your list. Each time you create a new contact for a group, a new contact profile will be added to your address book. If you don't want the people in your contact group to appear in your address book, use the Contact Name and E-Mail fields at the bottom of the properties box and click the Create For Group Only button.

Extend Your Windows Calendar

The Windows Calendar application has other, more advanced features that we haven't covered here, such as publishing your calendar to a Web site. You can find directions on how to accomplish these tasks by clicking the Help button found on the top menu bar. ■

BY KRIS GLASER



Windows Contacts helps you keep track of all your contacts and lets you include extra information about your contacts such as birthdays, anniversaries, and Web sites.

My Favorite Topics!

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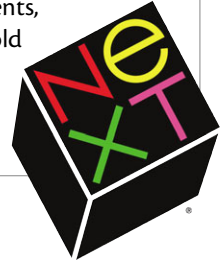
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What's NeXT?

On Oct. 12, 1988, Steve Jobs introduced the NeXT, a computer that retailed for \$6,000 and, despite some unique design elements, ultimately sold only 50,000 units.



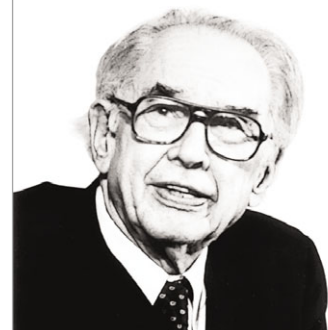
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Career Sites Popular In Economic Downturn

When it comes to looking for job-related resources, more Americans are searching online during the recession. A recent comScore study revealed that more than 65 million Americans visited Web sites in the Career Services & Development category in June, which is a 10% increase compared to one year ago.

John Vincent Atanasoff

This month in 1903, John Vincent Atanasoff was born in Hamilton N.Y. According to the *Smart Computing Encyclopedia*, "By official court order, John Atanasoff is recognized as the inventor of the first automatic electronic digital computer."



Smart Computing's Fun Site Of The Day

Odosketch

Feeling a little artsy? Spend some time getting creative at Odosketch (sketch.odopod.com), a simple online sketchpad. Choose from a variety of colored pencil-like tips in cool tones to create a doodle or a masterpiece. Browse recent and featured sketches to see what other online artists came up with.

DIY Project

Add eSATA To Your PC

The key to faster computing is to look for bottlenecks—devices or interfaces that can't transmit data as swiftly as the rest of the PC can—and fix them.

A classic example is the USB 2.0 interface. Millions of us own external hard drives that could write and read our data much faster than they do, if only they didn't have the bottleneck of USB 2.0 slowing them down.

Until the much speedier version 3.0 of USB hits the market (see the sidebar in this article), the best replacement for USB 2.0 is eSATA. It's the external version of the Serial Advanced Technology Attachment interface used for hard drives, SSDs (solid-state drives), and optical drives such as BDs (Blu-ray Discs) and DVDs.

eSATA extends the SATA interface outside the computer. It's practically indistinguishable from SATA in terms of data read and write speeds. Depending

on the rating of the drive controller, eSATA will provide drives with a theoretical speed limit of up to 1.5Gbps (less than 150MBps in real-world use) or 3Gbps (less than 300MBps), with 6Gbps eSATA still in the works. Note that a faster interface can't make a particular drive any speedier than its inherent abilities allow; however, eSATA won't limit an external hard drive to roughly 32 or 33MBps as does USB 2.0.

eSATA uses the same type of cable as SATA with the same electrical configuration, although it has a different style of connector. This means that adding eSATA ports to your PC may be as easy as installing an inexpensive passive adapter bracket.

Granted, USB 2.0 is found on millions of more computers than eSATA. This is the reason why most eSATA

devices, from external hard drives to special flash memory drives, also come with USB connectivity.

If you have a spare SATA drive, you can create your own eSATA hard drive using an enclosure such as one of the NexStars from Vantec (www.vantecusa.com). SATA connectivity is a key requirement here; you can't turn an old IDE (Integrated Drive Electronics) or PATA (Parallel ATA) internal drive into an eSATA external unit.

Adapter Brackets

If your motherboard has at least one unused SATA header and a spare expansion card slot, adding one or more eSATA connections is a snap.

Unpowered. The most common type of eSATA bracket comes with one



Even though it uses the same type of cable, eSATA (left) has a different connector than SATA (right).



Many external drives now come with eSATA ports in addition to the much slower but more widely used USB 2.0.

or two ports with data cables that have SATA connectors at the ends. There is no additional power cable to support bus-powered drives. A bracket such as this doesn't have a circuit board with an edge connector like a traditional expansion card, so it will bolt into place behind any type of slot. Prices start at about \$3 online.

To install an unpowered eSATA bracket, turn off your PC and open its side panel. (Occasionally touch a bare, grounded metal appliance as you work to discharge any static buildup.) Unscrew or unlock the blank bracket behind an empty expansion slot. In many computers, you may have to carefully twist or bend out a metal plate on the back of the PC to access the slot.

Next, fit the eSATA bracket into place and secure its top end with the slot's screw or locking mechanism. If there is supposed to be a screw, but one isn't available, scavenge one from a retail hard or optical drive kit, an electronics store, or a noncritical part of your PC case.

The eSATA port(s) should be ready to use as soon as you start your PC. The "Using eSATA" section at the end

of this article describes ways to connect and disconnect external SATA drives in a way that Windows will understand.

If your new eSATA bracket doesn't work at all, make sure that the SATA headers (male connectors) on the motherboard are enabled in the computer's BIOS (Basic Input/Output System). Restart the PC and then quickly press the indicated key to enter Setup (such as DELETE) when prompted. Be careful to activate the SATA ports but not to incorrectly enable them as part of a RAID (redundant array of independent disks), which may be a separate setting.

Powered. An improved type of eSATA bracket is one that provides a power connection through its port or ports. This allows for bus-powered devices such as eSATA flash drives to operate without a separate power connection, which usually takes the form of an auxiliary USB cable. Online prices for powered brackets start at about \$13.

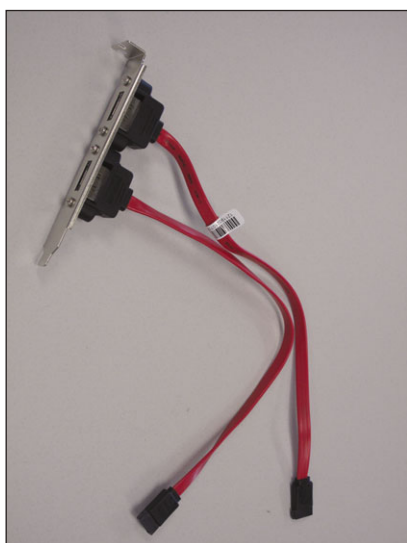
A powered eSATA bracket gets its energy from the computer's PSU (power supply unit), such as through a

4-pin Molex-style connector. After you install it according to the directions above for an unpowered bracket, hook up the power line to a spare connector from the PSU.

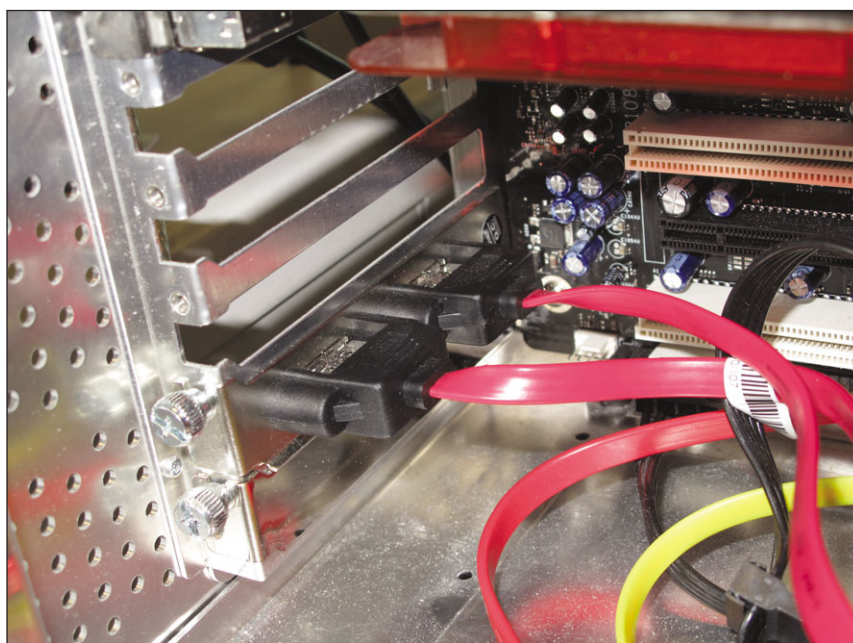
Add-In Cards

Are your motherboard's SATA headers all in use? Fear not; you can add eSATA by installing an expansion card. The least expensive cards start at about \$13 online. Get a PCI-E (Peripheral Component Interconnect Express) card for the best performance, if your computer supports this type of slot. An ordinary PCI card will limit throughput to less than 133MBps, which is nevertheless fast enough for today's hard and optical drives (but not certain SSDs).

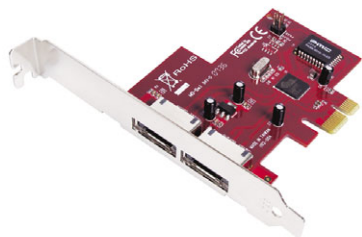
The beauty of installing an expansion card is the opportunity to upgrade your computer's SATA speed at the same time. If your new drive controller card features a faster interface than your motherboard offers, such as 3Gbps or even 6Gbps, you've just widened another potential bottleneck in your PC. SSDs are



A simple eSATA bracket fits in an expansion card slot in the rear of a desktop PC. The cables plug into SATA headers on the motherboard. A powered bracket also has a 4-pin cable that connects to the PC's power supply.



You don't need to install any drivers with an eSATA bracket, but you do need to make sure that the SATA ports are enabled in the computer's BIOS.



This \$25 Rosewill RC-219 adapter proves that you don't have to spend much money to add eSATA to a PC if all of its internal SATA headers are in use.



With an eSATA port, an external hard drive can be just as fast as an internal drive. Special eSATA flash drives can approach 100MBps, too.

already demonstrating read speeds approaching the 300MBps theoretical limit of 3Gbps SATA, and a few are so fast that they skip SATA altogether and plug directly into PCI-E slots. (Hard drives should be able to run at full tilt under 3Gbps SATA for at least the next few years.)

Installation. First, visit your new eSATA card manufacturer's Web site. In the Support section, find and download the latest driver for the card's specific model number and your OS (operating system), such as 32-bit Windows Vista. If the download is compressed, such as with a .ZIP or .RAR extension, unpack it with Windows or a suitable third-party utility such as WinRAR (www.rarlab.com).

To install our Rosewill RC-219 eSATA card in our test PC, we turned off the computer, opened its side panel, and selected a free PCI-E slot. Next, we removed the blank plate behind the slot on the rear of the computer. We rocked the card carefully but firmly

into the slot, and then we locked it into place with the provided screw.

Next, we started our PC. When Windows' Found New Hardware Wizard appeared, we directed it to use the driver we had just downloaded to our hard drive.

Using eSATA

Depending on your computer's drive controller, it may or may not automatically detect an eSATA device when you plug it in. If Windows displays messages at the lower right of the screen about installing a driver for the new drive, you can start to move data to or from the device as soon as the OS tells you that it's ready to use.

On the other hand, if nothing happens for a minute or more after you attach an eSATA drive (and turn it on, if necessary), press the WIN (Windows logo) and PAUSE keys at the same time. In WinXP, click the Hardware tab and Device Manager. In Vista, simply click Device Manager. Click the top-most entry in the list, which should be the computer's name. Next, under the Action menu, click Scan For Hardware Changes. Windows should detect the drive and install a driver for it.

In order to safely remove an eSATA drive, right-click its Device Manager entry under Disk Drives and click Uninstall. When Windows tells you it's OK to remove the eSATA device, do so or turn it off. This procedure may not always work, depending on your controller. If an error message appears, simply wait to disconnect or turn off the eSATA drive until after you shut down your PC.

There's a handy freeware utility called HotSwap! (tinyurl.com/ybqrs3) that makes the eSATA attachment/detachment process almost as easy as using Windows' green arrow-shaped Safely Remove Hardware icon for USB devices. HotSwap's red arrow icon in the System Tray lets you right-click it for the Scan For Hardware Changes command. You can also click the icon for the option to safely remove (hotswap)

the eSATA drive. Again, if this doesn't work, wait and turn off the drive after you shut down the PC.

Finally, try to remember to keep an eSATA drive shut off or disconnected when you boot your PC, or it might confuse the BIOS into trying to boot from the external drive (unless that's the way you want it). ■

BY MARTY SEMS

USB 3.0

But wait—what about USB 3.0? This new interface promises to uncork USB's performance. Whereas USB 2.0 maxes out at 480Mbps (realistically, about 33MBps), USB 3.0's 4.8Gbps throughput ceiling promises to keep the interface ahead of hard drives (if not necessarily SSDs [solid-state drives]) for a few years.

To add USB 3.0 to your existing computer, you'll need to wait until there are adapters suitable for desktop PCs (such as PCI and PCI-Express cards) or laptops (such as ExpressCards), as applicable. External hard drives, SSDs, and BD (Blu-ray Disc) drives are examples of data-intensive peripherals that can actually take advantage of USB 3.0's new SuperSpeed performance tier.

Finally, you'll also need a new USB 3.0 cable, which has five more pins in its connectors than a common USB 1.1/2.0 cable. Fortunately, you can use a USB 3.0 cable with legacy USB 1.1/2.0 devices (but only up to their top speeds). USB 3.0 ports offer the same type of backward-compatibility and will run USB 1.1/2.0 devices at their customary level of performance.

So why bother with eSATA if USB 3.0 is on the way? Well, for starters, the new USB still hasn't arrived as of press time. Moreover, USB 3.0 will probably take time to become as trouble-free as the competition, because SATA has more than half a decade of driver development under its belt. The new SuperSpeed version of USB may eclipse eSATA in portable flash drives, however, as the latter was always trickier to use than USB 2.0. ■

Home & Small-Business Security:

It's Easier Than You Might Think



Perhaps when you think of setting up a home or small-business surveillance system, multi-thousand-dollar systems come to mind. Cables everywhere. Special monitors. Complex control systems. It can be enough to make your head spin. Thanks to the rise of network-friendly digital video cameras, though, surveillance is no longer the overwhelming proposition it used to be. For relatively little money and just a bit of setup effort, you can have a surprisingly flexible surveillance system running in minutes.

IP Camera Essentials

Usually, the key difference between an IP (Internet Protocol) surveillance camera and the little Web cam sitting atop your monitor is that IP cameras integrate a Web server, and Web cams do not. With a Web server, the camera has its own IP address, a unique location in cyberspace that can be accessed whether or not your PC is on. Viewing

software is installed on your PC that seeks data from this online address—or several addresses if you have multiple cameras. The camera then streams data from its address to your computer's address, and your software can display the images, record them to your hard drive, or both.

The beauty of an IP camera having its own built-in server is that the output video doesn't have to go to a PC. The stream can go to a PC, cell phone, FTP (File Transfer Protocol) repository, or any other compatible device. Similarly, once you've given the camera its address on your network, you can tap into and control an IP camera's settings from any Web browser. Access to this control is password-protected to keep away unwanted visitors.

In the consumer category, most IP cameras record video at QVGA (Quarter Video Graphics Array) resolution (320 x 240 pixels), although more is usually better. This is sufficient for a fair amount of detail, but

don't expect miracles of clarity. Often, you simply want the ability to detect movement—a feature handled either by the camera or by a PC-based monitoring program (but usually by the camera). Either way, the surveillance system can detect the number of pixels changing in a scene, and, once that amount of movement passes a sensitivity threshold set by the user and triggers an “alert,” the camera can start capturing video, send you a message, and even forward video clips to your cell phone. On lower-end products, much of this is handled by PC software, but higher-end cameras can take over more surveillance functions, so it won't matter if your PC is turned off.

Other factors you might look for in an IP camera include the ability to capture in infrared (for night surveillance), how much visual “noise” appears in low-light conditions, the number of video frames per second at top resolution (30fps is best), whether the camera has a microphone for capturing audio, and how simple the software is to use and set up.

To help illustrate these considerations, we set up four surveillance options. We wish we could say that all of them were five-minute setup jobs that any novice could tackle. They weren't. Some aspects of surveillance camera setup can be challenging. But with a little patience, attention to detail, and perhaps a call or two to support, you can end up with an affordable solution able to meet your security needs.

Axis M1031-W Network Camera

www.axis.com

Axis is the only video surveillance specialist in our lineup, and it shows. First off, the camera advertises a 640 x 480 sensor instead of the usual 320 x 240. It can compress video into MJPEG (Motion Joint Photographic Experts Group) or MPEG-4 (Moving Picture Experts Group-4) formats, which is pretty standard, but also the higher quality H.264, which we viewed in Internet Explorer with a QuickTime

browser plug-in. Alternatively, you can view and record streams with the bundled Axis Media Control application.

The M1031-W features a two-way microphone/speaker you can control from your PC. This is handy if you want to use the camera as a front entry gatekeeper (great for monitoring solicitors), for example, because you can also set the alarm trigger to play a recorded warning. Accompanying this is an integrated illumination lamp, sufficient for viewing in a dark room up to about 10 feet away. The M1031-W doesn't offer built-in infrared lamps for night viewing, but it does have a PIR (passive infrared) sensor for detecting motion even in pitch-black conditions. This works by detecting an object of one temperature (such as an intruder) moving in front of an object of a different temperature (such as a wall).

Slick features aside, the M1031-W has its own stand as well as a G-clamp for mounting to a shelf. It connects via Ethernet or 802.11b/g and delivers the most stable wireless service of any camera reviewed here. Like most IP cameras, the M1031-W requires you to set up a dynamic DNS (Domain Name System) account if you want to view your video over the Internet, but Axis makes this process easier than many of its competitors, in part by providing you with a complimentary DDNS (dynamic DNS) account at axiscam.net. We were also impressed with the simplicity and thoroughness of Axis' instructions for router configuration to enable outside video streaming, although novices may still need to call their ISPs (Internet service providers) and/or router vendors for additional help in implementing the changes. Advanced users will find this a very flexible unit in terms of streaming protocols, accessibility, and stream uploading.

The M1031-W is priced near the top of the consumer range (about \$300). Still, the M1031-W has very persuasive security features and is highly configurable. Just know that some learning may be required to use everything Axis provides.

Linksys Wireless-G Internet Home Monitoring Camera (WVC54GCA)

www.linksysbycisco.com

Given that the WVC54GCA features an integrated Web server, both 802.11g wireless and Ethernet network support, and bundled monitoring software able to handle up to nine cameras, this unit is a steal at about \$120, provided you don't need the highest image quality. Linksys' biggest flaw is its 320 x 240 sensor, which looks pixelated and struggles with low-light scenes. However, the camera features a microphone.

For basic surveillance, this unit will serve well enough. You can set options for motion detection, and alerts can trigger both email notification and video or photo uploads to an FTP server. Mind you, at this price point, you'll need to read Linksys' ample online documentation on how to set up these features and others, including

mobile phone streaming. If you want remote streaming, the WVC54GCA supports TZO DDNS service, which charges \$19.95 per year after the first free year of service.

At first, we were faced with what appeared to be two dead cameras. A Linksys phone tech determined that the problem was an ActiveX control failing to install in Internet Explorer. With this solved, both cameras worked fine. This sounds like a lot of complaining, but \$120 for a compact, attractive, wireless IP camera makes this the McDonald's of surveillance options.

Logitech Video Security System

www.logitech.com

Logitech's Video Security system is for buyers who want PC-based security but lack in-wall Ethernet throughout their homes and have problems with Wi-Fi. Everyone has power wiring throughout their homes, and powerline



Today's PC-centric surveillance systems, such as the Logitech Indoor Video Security Master System, let you monitor and manage several cameras throughout your home from a single software interface.



The Axis M1031-W features an internal Wi-Fi antenna and loads of clever security features, including two-way audio, an illumination lamp, and an active tampering alarm.

devices essentially treat this as network cabling. Each Logitech Master camera kit comes with a USB adapter that connects the PC to a wall outlet to accept incoming video streams.

There are three Logitech camera designs: the Indoor, Outdoor, and Spy (which masquerades as a digital clock).



When you want basic surveillance features on the cheap and don't require high-quality image clarity, prepare to read the manual and try Linksys' WVC54GCA.

The Indoor features an Ethernet port, while the Outdoor and Spy models have an integrated power cable. The advantage of the Ethernet port is that, while Logitech bundles a thin, 10-foot Ethernet wire, you can upgrade to a longer cable if your room requires it. In contrast, the power cable attached to the Outdoor camera is entirely too short for attaching to the underside of your eaves, for example, where you'd need to run an extension cable to the power outlet by the ground—and powerline devices are very picky about extension cables, power strips, and so on. We ended up using the Indoor camera's clever suction cup mounting to stick the camera to a window overlooking the driveway in order to cover the same area we'd planned for the Outdoor camera.

We tested in a 2,500-square-foot house, setting cameras at various distances from the controlling PC. Our Indoor camera registered a "Good" connection quality in one room across the house but "Poor" quality in the next room over. Also, note that while each model uses a 320 x 240 native image resolution, the Spy camera, with its pinhole-style lens opening, yields fuzzier-looking video than the other two models. Overall, the image quality of Logitech's cameras was surprisingly good.

The WiLife Command Center (the software included with every Logitech Master system) can display and record up to six cameras. You can send email and cell phone alerts based on motion triggers, plus you can remotely view your video streams free when you sign up for a WiLife online account. Logitech makes this extremely simple to set up compared to traditional IP cameras. You can only view video on a Windows Mobile-based cell phone, but you can upgrade to WiLife Platinum (\$79.95 annually) to store video online (50MB is included in a basic subscription), share it with others, and automatically monitor your connections. Circuit and cord distance issues aside, this is a solid choice for novices wanting an easy

foray into IP surveillance. The Indoor and Outdoor systems cost \$299.99 (add-on cameras cost \$229.99), while the Spy system is \$329.99 (add-on camera is \$249.99).

TRENDnet TV-IP422W

www.trendnet.com

TRENDnet surprises in a big way with the TV-IP422W (\$367.99). You get Ethernet, secure 802.11b/g, M-JPEG and MPEG-4 compression, motion detection, email alerts, FTP uploading, and you can screw the base into a wall or ceiling with the included mounting kit. We have only two complaints: The video is a bit blurry, and TRENDnet's multicamera monitoring software (up to 16 cameras supported) needs a usability overhaul.

The killer feature here is TRENDnet's motorized 330-degree pan and 105-degree tilt capabilities. All other cameras here are fixed—you point them in a direction, and there they stay. With the TV-IP422W, you can remotely control where the lens points. Just click a spot on the Live View window in your browser, and the camera shifts to make that the new center. Pan/tilt cameras usually cost much more than this, and the feature is immensely useful.

Moreover, the lens is surrounded by a ring of infrared lamps for night illumination. TRENDnet rates night viewing for up to 16 feet, but we observed fair detail at up to 20 to 25 feet with an unobstructed view. Plug a little speaker into the audio jack, enable the microphone, and you've got a video intercom. In case you have a network problem, leave a flash drive plugged into the camera's USB port, and you can store triggered video clips to the drive. The TV-IP422W's dynamic DNS configuration is probably the least friendly of the four cameras we reviewed, but it's not impossible. If you plan to only have one camera for surveillance and need a wide but affordable range of security features, the TV-IP422W offers the best bang for the buck. ■

BY WILLIAM VAN WINKLE

Many of our readers come across fast, easy ways to solve a problem or accomplish a task. Well, we'd like to hear about it! If you have a great tip you'd like to share, email us at readertips@smartcomputing.com. If we print your tip, we'll send you a free *Smart Computing* T-shirt. You'll be the envy of all (well, some) of your friends.

Please include your first name, last name, and address so that we can give you credit if we print your tip. (And so that we can send your T-shirt to you, of course.) Please limit your tip to 200 words or fewer. Not all tips received will be printed, and tips may be edited for length and clarity.



Short & Simple Tips To Make Things Easier

Network & Printing

I have a wireless network at home, and when I wanted to print from my laptop, I used to have trouble sending prints wirelessly to my printer that was hard wired to my desktop PC. The simple solution was to purchase a print server, which is available anywhere from \$25 to \$100. I purchased a \$25 model that plugs right into my wireless router, so I don't have to turn on my desktop to print from my laptop nor purchase a new wireless printer. Before you purchase a print server, check for compatibility with your printer. The manufacturer of the server will list all of the printers it supports.

.....
Harry W., Milledgeville, Ga.

Keep Software Updated

I found a wonderful program called Update Notifier from Cleansofts.org that searches all your applications and lets you know if any updates are available, so you'll no longer need to manually check if there's a new version available. You can also store Update Notifier on a USB flash drive and use it to check for updates on a laptop or a friend's computer.

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Keith B., Melbourne, Fla.

Web-Based Screen Reader

If you are blind or visually impaired, Microsoft Narrator might not provide enough features for you to work efficiently. I found a Web alternative titled System Access To Go from Serotek. To start using the application, hold down the WINDOWS and R keys, type www.serotek.com, and press ENTER. Once you reach the Serotek Web site, follow the spoken instructions to allow the application to register and install the screen reader software.

(NOTE: Once you have an account, you can open the Web page to load the program, which you'll need to keep open in the background, to hear on-screen text.)

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Joshua K., Iron, Minn.

Good Use Of Conditional Formatting

I work for a company that requires me to keep accurate records of the cash exchanges at a number of events. To simplify things, I use Excel spreadsheets for the daily input and accumulation of the data in a single report form. To help the person entering the data into the worksheet, I tint all the spreadsheet cells light green and then set up conditional formatting to make it so that the background turns white when data is entered. To use conditional formatting in Excel 2007, click the cell to be formatted and click the Conditional Formatting button in the Styles section. In the drop-down menu, select Highlight Cell Rules, click the Greater Than option, and type 0 in the Format Cells That Are Greater Than field. Select the drop-down menu on the right, choose Custom Format, and click the White color (found in the Fill tab). Select OK, and when data is entered into the cell, the background will change to white, similar to the rest of the worksheet's entered data.

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Bud R., Mesa, Ariz.

Instant DJ

Want to play all your computer's music files through your home stereo? Visit your local electronics store and pick up a stereo Mini Plug-to-RCA adapter, which will let you connect your PC to the auxiliary RCA jack on your stereo or home-theater receiver. The Mini Plug-to-RCA adapter is ideal for laptops because you can include the adapter in your laptop bag to plug your laptop into any amplifier with RCA jacks.

Jim M., Bolingbrook, Ill.

Can't We All Just Get Along?

Why There Is Room For Both Macs & PCs In The Computing World

The Mac vs. PC debate has waged long and bloody, with both sides getting increasingly vitriolic in their hatred for one another. Each claims that their chosen platform is better than the other, and nobody can seem to come to any sort of amicable consensus.

Case in point: The two recent Mac and PC ad campaigns. Surely you've seen them by now. In the Mac ads, a "cool" young man who calls himself a "Mac" (Justin Long) chats with a dowdy oaf ("PC," played by the hilarious John Hodgman). In each case, the hapless PC attempts to one-up Mac or prove that he's a great computer. Needless to say, he fails each time. The ads are pretty brutal.

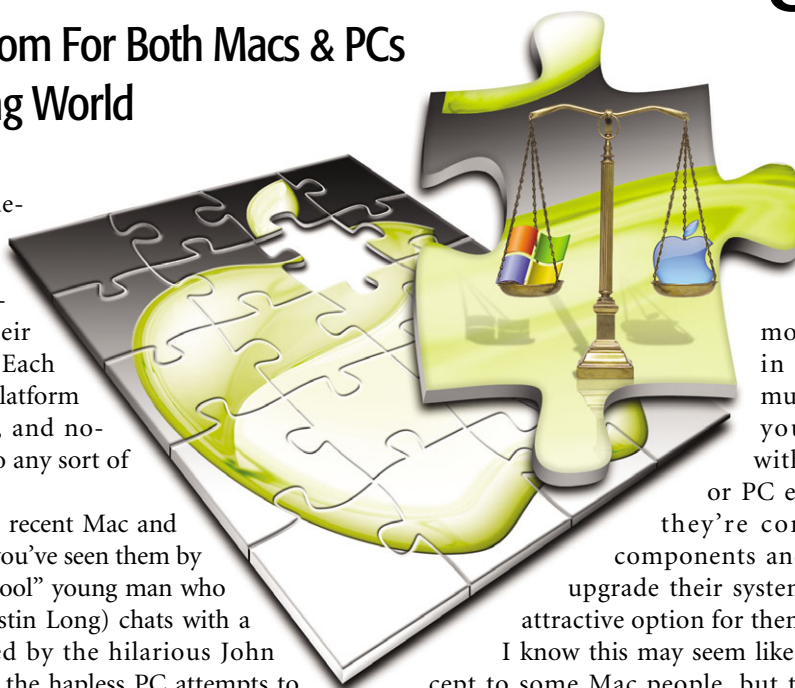
Microsoft has launched its own ad campaign where they give a shopper money to buy a computer that fits their needs for under \$700. If they can find one, they can keep the computer. Shortly, the protagonist, saddened and disappointed by the cost and (what they perceive as) poor features of Macs, find euphoria by purchasing a PC. An actor in one of the ads sighs and sarcastically states, "I'm just not *cool* enough to be a Mac person." Ouch. Talk about snarky.

There's nothing we can do about the volley going back and forth between two industry giants, but we can certainly do our part to un-snark (is that a word?) things as far as we the consumers are concerned.

Apples & Oranges, In A Way

When people argue over which is better, Mac or PC, they're often both making valid arguments. The disconnect comes because the priorities of various computer users are different, and thus the argument can never come to a conclusion.

Mac enthusiasts love the simplicity of their computers and the fact that they have little to fear from security threats. The OS X operating system has been a huge hit with consumers for its stability and attractive user interface. Making the iPhone and all versions of the iPod so easily compatible with Macs through iTunes was a stroke of genius by Apple.



Gamers especially generally shun Macs, in large part because you can't upgrade most of the components in them; you're pretty much stuck with the specs your computer comes with. As any good gamer or PC enthusiast will tell you, they're constantly adding new components and tweaking settings to upgrade their systems, so a Mac is not an attractive option for them.

I know this may seem like a strange, foreign concept to some Mac people, but there are a great many people who *like* opening up their computers and fiddling around with components. These folks are baffled by the popularity of Macs, unable to imagine why anyone would pay so much money for one.

Of course, PCs do have many more stability and security issues than Macs, and the latest Windows operating system, Vista, had many detractors.

Let It Ride

All the above being said, it's also important to remember that someone doesn't need a hard and fast reason for preferring Macs over PCs or vice versa. Sometimes, people just prefer one or the other, and that's perfectly valid.

Some competition between the two camps is not such a bad thing. Competition is healthy and results in big wins for consumers. For too long, PCs were a monolithic necessity for just about any computer user; now that Macs have gained such a strong foothold in the marketplace (one that continues to grow, I might add), PC makers are forced to come up with a better mousetrap, so to speak.

But the sword cuts both ways. The Apple folks know that, and they spend massive amounts of time and energy maneuvering their products and pricing to entice us to buy in volume at just the right time.

So, let's keep up a healthy, respectful dialogue about the best parts of our computers and watch as Apple and PC makers slowly start to hear us and make improvements accordingly. ■

Novel Writing On Your Mac

StoryMill 3.2.2

\$44.95 (electronic version) \$49.95 (boxed) | Mariner Software
(612) 529-3770 | www.marinersoftware.com



Whether you need a simple writing environment, a way to dynamically track a large writing project, or something in between, Mariner Software had you in mind when creating StoryMill.

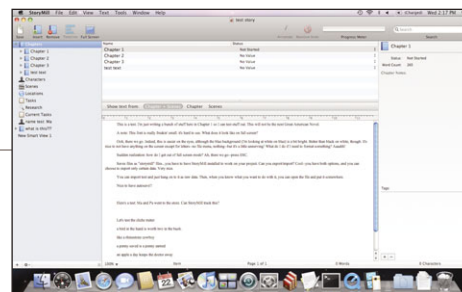
StoryMill is software designed to help writers work smarter. Accurately self-described as “part word processor, part database,” this program offers multiple levels of tracking for important elements, including scenes and characters.

Although the interface and features take some getting used to, StoryMill can be an enormously valuable tool for any writer. You can create sections for any writing project; if it's something as large as a novel, you can separate your work into chapters and scenes, organizing all the content by character, location, and

Key Feature: Flexibility to move between a simple, clean writing environment and a powerful database of organized information.

even time. If your project is smaller, you can forgo that structure and simply create sections that make up a larger work. Everything can be customized, moved around, and tagged with metadata (extra information such as dates and names) for easy organization and retrieval.

If you need a clutter-free writing environment, switch to Full Screen mode, which provides a workspace that contains only text (white, on a blue background to make it easier on the eyes), and nothing else—not even a file menu.



Other attractive features include a cliché finder, a timeline view, and smartviews, which is an intuitive way to organize content. If you don't mind spending an hour or two adjusting to StoryMill's interface, this would be a valuable tool for any writer. ■■

BY SETH COLANER

Organize Your Videos

Clipstart

\$29 for an individual user | Riverfold
support@riverfold.com | www.riverfold.com



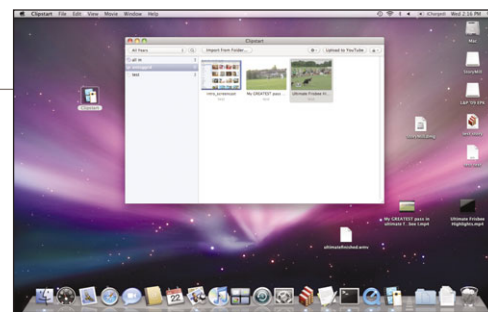
Clipstart is an application designed to make organizing videos on your Mac as simple and elegant as possible. Indeed, it's a straightforward application with a refreshingly clean interface and plenty of features.

When you launch the application, ClipStart will aggregate all the videos it can find on your computer and organize them by year. (You can also upload video clips directly from a camera or your iPhone 3GS.) You can further sort them by adding tags, which you can do one at a time or by using some of the easy keyboard shortcuts to tag many clips at once. (You can find a list of keyboard shortcuts in the Help section.) Tags are especially useful in ClipStart, as you can search your library and sort the results by tags.

Key Feature: Clipstart has easy-to-use but powerful uploading capabilities.

You can play a video back to preview it using Quick Look (press the Spacebar as a keyboard shortcut). Clips are also viewable in video thumbnails—just press SHIFT-Spacebar.

Uploading video to an online video-sharing site such as YouTube (www.youtube.com) is a breeze. You can click Upload To [your chosen video-sharing site] to send a clip without so much as a prompt. Conversely, you can select options for your upload if you like, including adding a description and checking a box to convert the selection to H.264 before it uploads.



Clipstart is designed for short video clips such as home movies; it's not ideal for your digitized feature film collection, for instance. However, it's a well-designed, easy-to-use application that anyone with a handful (or library full) of video clips will find quite handy. ■■

BY SETH COLANER

Compiled by Joanna Safford

Illustrated by Lori Garriss

Find It Online

Build Your Own Web Site

Yola

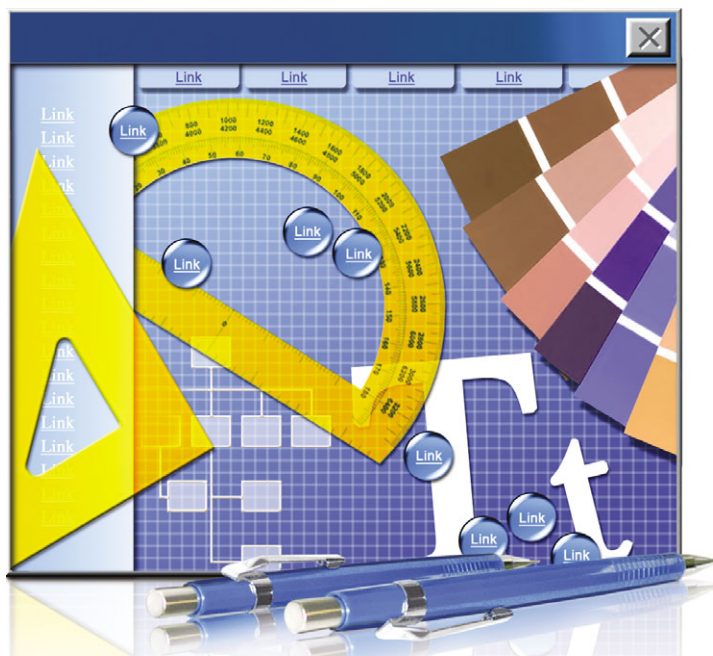
www.yola.com

Yola believes “you should be able to build and host your Web site without paying for a designer, a suite of software, or a hosting company.” By signing up for Yola’s free services, you can create and edit a Web site, blog, or online store. Yola features an extensive Style Guide from which you can select a particular Web site style that includes unique color palettes, menus, and images. You can easily use Yola’s File Manager to upload images, text, and other content directly to your site by dragging and dropping items onto each page.

Webnode

www.webnode.com

Web builders who desire multifunctional control over their Web sites will appreciate Webnode’s three-tiered approach to site administration: Tools include Webnode Builder, Webnode Statistics, and Webnode E-mail. Webnode Builder not only helps you create a professional-looking site, but it also lets you choose to use it as a blog, photo gallery, ecommerce site, and product catalog. Webnode E-mail enables you to manage your Web messages while providing spam and antivirus protection. If you plan to track your Web traffic (hits, data transfers, and page views), Webnode Statistics monitors site activity and visitation so you can make sure you’re reaching your marketing goals. Additionally, Webnode’s social



features are abundant, including bookmarking, tagging, RSS (Really Simple Syndication) forwarding, third-party integration, and widget incorporation.

Doodlekit

www.doodlekit.com

Feature-packed and multibrowser-compatible, Doodlekit lets you design a personalized site using color themes, background patterns, and stock photos that reflect your style. Doodlekit is an ideal Web site creator for anyone interested in launching an online business, as it offers commerce-oriented options such as PayPal support, form submission tools, Google AdSense (revenue-generating ad tool), and site usage stats. In terms of updating your site, Doodlekit provides an advanced page editor for quick editing and formatting. The Free Doodlekit plan also features a blog, RSS feeds, photo albums, and full site searching. You can continue to

upgrade your site plan with the Simple, Business, Advanced, and Premium options, ranging from \$14 to \$99.

Wix

www.wix.com

If you’re interested in building a site full of eye-catching multimedia, you’ll

probably like what Wix has to offer. You can build a free Web site for business, consulting, photography, or personal use. In addition, you can select artistic templates and music-based designs to promote your media site. If you have a MySpace account, you can modify your layout with various unique designs, backgrounds, and images. Wix also lets you create a site from scratch by choosing a blank template on which you can add Flash-based features, photos, videos, music, and more. To better promote your site, Wix

integrates with MySpace and Facebook by letting you post banners, widgets, and other media to your online profiles.

Weebly

www.weebly.com

Not unlike the aforementioned sites, Weebly delivers in multiple ways. Weebly hosts your site without restricting your storage or limiting the number of pages you want to create. You can make your own site through the customized Weebly editor or by choosing one of the 65 custom designs. One of the best features in Weebly is the variety of content you can add to your pages such as pictures, video, audio, maps, galleries, files, RSS feeds, and HTML (Hypertext Markup Language) embedded code. Weebly won’t advertise on your site, but it does integrate Google AdSense so you can earn money through your site.

That's News To You

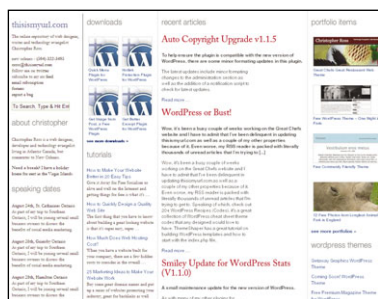
Finding the appropriate online group to match your interests can be a monumental task. So each month, we scour the Internet to bring you the friendliest forums and most interesting bloggers the Web has to offer. This month, we are focusing on a blogger who's got plenty of Web-savvy advice for the site-building novice.

thisismyurl.com

www.thisismyurl.com

Inside the tangled World Wide Web, there's information and advice at every click. A Web surfer's task is to sift through what's valuable and what to disregard. These realities are even more relevant when you're the one building a Web site.

At thisismyurl.com, you'll find an abundance of articles, tutorials, and resources that will give you direction in building and managing your Web site.



Christopher Ross, a Web designer, writer, and technology enthusiast, administers the blog. He recognizes that social media

is entirely relevant to maintaining a successful Web site, evidenced by his long list of networking links, such as Facebook, Flickr, LinkedIn, MySpace, Twitter, and YouTube.

Many of Ross' posts are straightforward instructional tutorials that provide easy-to-digest information. Examples include "How To Make Your Website Better In 20 Easy Tips" and "25 Marketing Ideas To Make Your Website Work."

Offering some site-building advice, Ross says, "There are lots of great ways to start by building on others' wonderful work, and many designers/developers give away free graphics and templates for just that purpose." He suggests that you "think of it as a recipe and just follow along until you're confident enough to do it yourself."

As you're piecing your site together, it's important to consider how it will evolve in light of the continued transformation of the global Web.

"The Web is going to become even more interconnected and open than ever before," says Ross. "Content posted to your own Web site will automatically update your Twitter accounts, publish news on Facebook, and promote your business on LinkedIn, as well as hundreds of other popular sites."

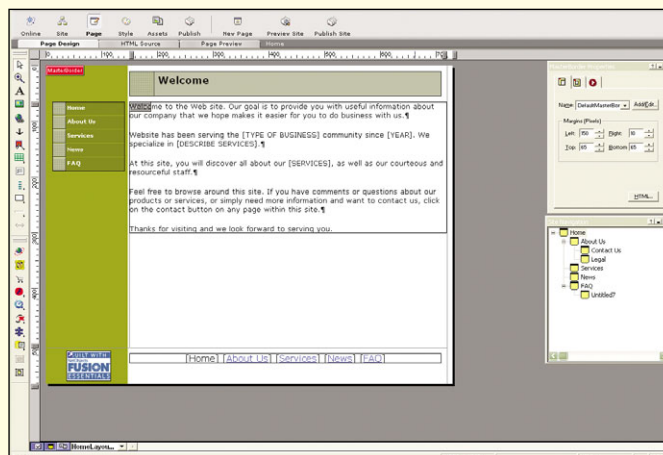
Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month, we feature highlights from our pickings. This month, we'll show you free Web design software.

NetObjects Fusion Essentials

www.netobjects.com

More advanced Web design software suites with expanded site-building elements, such as NetObjects Fusion Essentials, offer just as many, if not more, architectural features needed to piece together an impressive Web site. To manage and edit your ongoing site-building projects in NetObjects, you'll organize your **sitemap** (a Web page that breaks down each page on one site for easy navigation) by using a flowchart-style method. This way, you'll have a



visual representation of every building stage of your site.

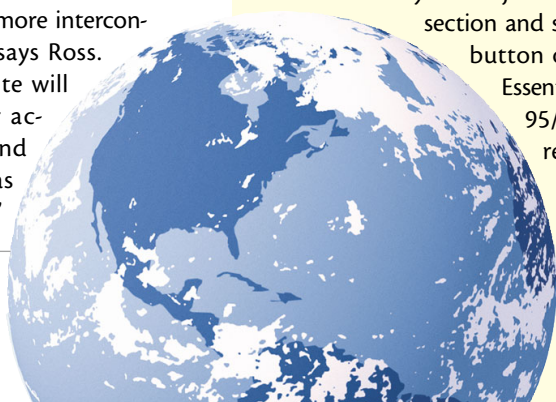
With NetObjects, you can use the site Navigation window to view the pages you've already constructed. You can add a new

page by clicking the Page button on the main toolbar; you'll also use this toolbar to edit the style of your site and then preview and publish the finished version. Previewing your site is essential because you want to ensure that it appears well-structured and informative.

The software features a built-in FTP (File Transfer Protocol) tool through which you can add files from your PC to the site. Add photo galleries, business tools, custom HTML (to create links), Flash, and QuickTime to tailor your site to your preference, so you can meet your personal goals for your site.

To try NetObjects Fusion Essentials, click the Products section and select Essentials. Click the download button on the right column to run Fusion Essentials. Your PC must support Windows 95/98/NT/2000/Me/XP. Other system requirements include 100MB of free hard drive space, 64MB of RAM, and at least a DSL (Digital Subscriber Line) Internet connection.

The Page Design tab lets you view every part of your Web site. You can edit text and add features according to your mental blueprint.



Web Tips

Enhance Your Time Online

Template To Help You Excel

Problem: I use Microsoft Excel quite a bit, but I'm unsure of how to create some of the more advanced spreadsheets.

Solution: Microsoft Excel is a great tool for creating spreadsheets and databases, but it can be confusing if you're not familiar with all of the features and options. Vertex42 (www.vertex42.com) offers premade Excel templates you can download and use right away. For example, you can download templates for your personal budget, a family budget, wedding budget, inventory list, time sheet, and a retirement and savings plan. At Vertex42, you'll also find several other tools, such as financial calculators, calendars, and tutorials to help you become more familiar with Excel, finance, statistics, and engineering.

Better Your Writing Skills

Problem: I enjoy writing, but I need to work on my style, grammar, and spelling skills.

Solution: Microsoft Office alerts you to some spelling and grammar issues, but After The Deadline (www.polishmywriting.com) gives you a few more suggestions. Once you've composed a document (whether it be a letter, email, or research paper), copy and paste the text into the box provided on the After The Deadline Web site. Click Check Writing, and you will receive spelling (red underline), grammar (green underline), and style (blue underline) suggestions. To view the feedback from After The Deadline, right-click the underlined areas.

Don't Forget It

Problem: When I'm surfing the Internet, I often come across interesting things that I want to come back to, but I can never remember where they are.

Solution: We often search for one thing and stumble upon others, such as recipes, cool gadgets, an interesting Web site, or a book review. If you

find something you want to remember to look at later, use Corkboard (www.corkboard.it) to save the Web destination for you. If it's a product you're looking for, Corkboard will check sites such as Amazon.com (www.amazon.com) for more details. You can even share the items you come across on your Twitter (twitter.com) or Facebook (www.facebook.com) accounts. All you need to do is sign up for a free account and then begin collecting gems from the Web.

Track It

Problem: There are several blogs and other Web sites I like to visit, but I'm never sure when they get new content.

Solution: You can sign up for a free account on Follow That Page (www.followthatpage.com) and receive an alert when the page has changed. Follow That Page will send you an email when the Web site has new content, so you're always aware when new things are posted. This can include your own Web site. For each user, Follow That Page can perform 100 daily checks and one check per hour. If you have more than 100 pages you are following, it will still check your pages, but it won't be done in a 24-hour period. You can also set the filters to

ignore and block certain updates by entering keywords and phrases.

Lots To Do, Little Time To Do It

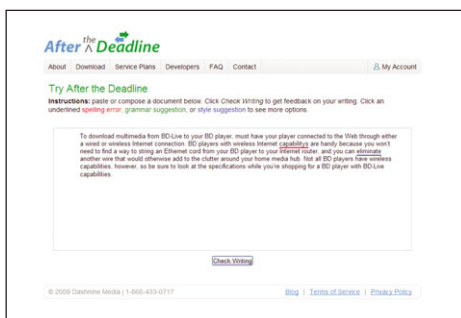
Problem: I have a full-time job, but I am also the head of our household. I could use some help around the house, but I can't afford it.



Alice helps you save time and money by delivering products and offering coupons.

Solution: You need Alice. Alice (www.alice.com) is a free online program that works like a personal shopper. It helps you keep track of which household items you are running out of, such as paper towels and trash bags, so you can add them to your list of things to pick up at the grocery store. You can also purchase items online directly from Alice to save you time that would otherwise be spent wandering the grocery store aisles. Finally, Alice can help you save money by offering coupons for items and brands you regularly purchase, and there are no shipping and handling charges. ■

BY TESSA WARNER BRENNEMAN



After The Deadline helps you improve your writing abilities by pointing out style, grammar, and spelling issues.

Welcome To The Blogosphere

Why Blogs Are So Popular & How To Start Your Own



late 1990s, most blogs took the form of diaries, but rather than logging insights, opinions, and reactions on paper for storing in a dresser drawer, bloggers posted digital entries in chronological order to a central online location where others could read them and leave comments.

Present-day blogs still consist of content the blogger generates, but the nature of that content has moved light-years beyond just being public diaries. Blogs are now dedicated to practically every imaginable topic. In fact, it's difficult

finding a topic there isn't a blog about, whether the subject falls under politics, sports, government, entertainment, religion, finances, parenting, shopping, home repair, travel, pets, history, space, nature, education, and so on.

Smart Computing, for example, maintains a tech-related blog at SmartComputing.com that's updated daily. Many companies maintain blogs to communicate developments, product details, and announcements with customers, partners, and competition. Intel (scoop.intel.com), Microsoft (windowsteam.blog.com/blogs), and Google (googleblog.blogspot.com) are three examples. USA.gov includes employee-written blogs about federal programs and offerings at Gov Gab (blog.usa.gov/roller/govgab), while news outlets such as ESPN.com host

blogging areas (sports.espn.go.com/espn/blog/main) within their Web sites.

Beyond acquiring content, however, blogging is as much about generating it. If you're a fledgling author who has penned a crime thriller, for example, a blog is a great, low-cost avenue for selling an ebook version directly to readers. Having trouble keeping up-to-date with family events? A blog that gives any family member rights to post updates, photos, recipes, and more is one solution. Say you have years of experience making fly-fishing lures. A blog could let you share tutorials complete with detailed photos. Build a large enough reader following, add some advertising-related elements to your blog pages, and you could even make a few dollars off your passion. (For more on making money from blogging, see the "Blogging For Bucks" sidebar.)

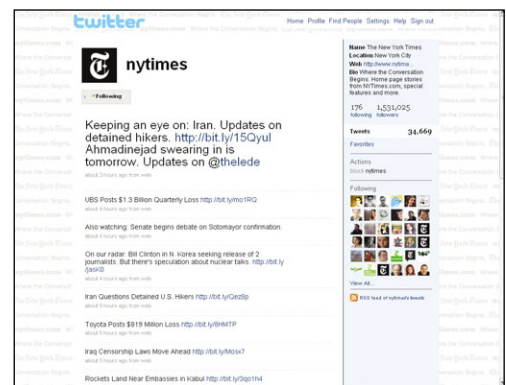
Choices, Choices, Choices

In the years since blogs began showing up online, the traditional text-based approach to blogging has evolved into other forms, including blogs featuring mostly photographs (photoblogs) or videos (vlogs). A recent and very popular blogging incarnation is microblogging. Whereas a traditional blog post might range from

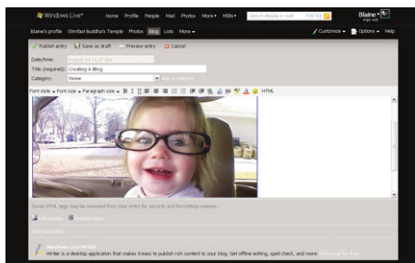
Blog. Blogger. Blogroll. Blogosphere. Roughly a decade ago these words didn't exist. Today, you likely not only have heard these terms, but you also might actually be a blogger. Even if you're not, you've seen or read something that stemmed from a blog—not surprising considering it's believed there are well over 100 million blogs globally. Now firmly entrenched in mainstream online culture and increasingly shaping how we communicate, share areas of expertise, acquire news, and even earn money, blogs are thriving. On the following pages, we'll discuss how blogs got to this point and help you create your own free blog.

Blog = Web Log

Blog simply stands for Web log. During blogging's early days in the



Twitter is an example of microblogging, or using short snippets of text to communicate with others. *The New York Times* uses Twitter to communicate with readers.



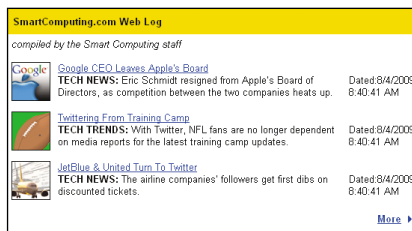
If you have a Windows Live account, you can post and archive blog entries from within your personal Spaces area.

a few paragraphs to multiple pages, microblogging involves using much shorter bursts of communication.

Twitter (www.twitter.com) is the most obvious example of microblogging. The site essentially serves as a free online destination that gives people tools to communicate via “tweets,” or entries limited to 140 characters. Twitter’s benefits can range from, say, sending tweets to family members about your dream trip to Paris as it’s happening to following tweets *The New York Times* creates to let readers know of breaking news.

Blogging and microblogging’s swelling popularity has largely benefited from the general public’s growing reliance on and comfortableness with mobile devices—a trend that has helped expand blogging beyond the PC and put it onto cell phones and smartphones. Blogging has also benefited RSS (Real Simple Syndication), a technology that lets users subscribe to blogs and aggregate new content as it’s added for reading in one location using a reader application.

So, just how big is blogging? According to the 2008 “State of The Blogosphere” report from Technorati (www.technorati.com), which tracks online media and hosts a blog search engine, there were 94.1 million U.S. blog readers and 22.6 million U.S. bloggers in 2007. Technorati also cites separate March 2008 data that claims 184 million users globally have created a blog, including 26.4 million U.S. users, while 346 million users worldwide read blogs.



Smart Computing maintains its own daily blog on technology-related events, news, and products at SmartComputing.com.

Create Your Own Blog

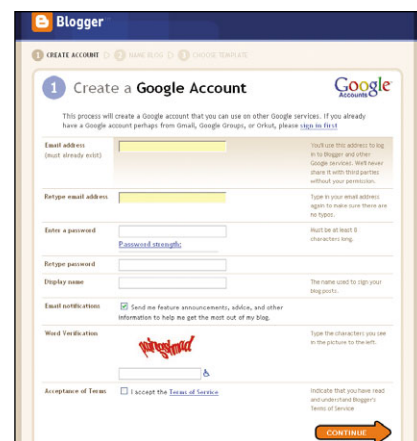
Once you’ve decided to start a blog, you need a place to keep it. If you already own a Web site, that’s a natural location. Otherwise, numerous free and paid services online offer publishing software and blog hosting services. We’ve chosen Google’s Blogger (www.blogger.com) as our example for creating a blog because it’s free and arguably the easiest for new bloggers to use. Other noteworthy services include WordPress (www.wordpress.com), TypePad (www.typepad.com), LiveJournal (www.livejournal.com), Movable Type (www.movabletype.com), and

Blogging For Bucks

An increasingly common reason people are now blogging is money. We’re not talking millions, but some part-time bloggers are pulling in thousands a month from their blogs. Although some blogs generate income through selling products, most income from blogging is tied to advertising. For typical bloggers, this means working with an ad network or service to display ads on your blog pages. Google’s AdSense (www.google.com/adsense), for example, is a free service that targets ads to your blog audience. The more visitors who interact with the ads, the more you earn. Generally, earning money blogging depends on creating respectable traffic to your blog, getting search engines to notice, and getting other blogs and Web sites to link to your blog. ■

Xanga (www.xanga.com). Additionally, if you have a Microsoft Windows Live account (free; home.live.com), you can blog from within your Windows Live Spaces area.

To create a blog at Blogger.com, follow these steps:



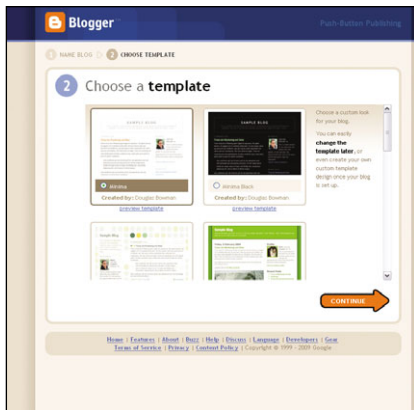
The first step to create a new blog at Blogger.com is creating a Google account, which is required to log in to Blogger.com and access your blog.

1. On the Blogger.com home page, click Create A Blog. The following page will walk you through creating a Google account, which is required to log in to Blogger.com and access your blog. Beyond supplying an email address, you’ll need to create a password and display name and accept Google’s terms of service. Next, click Continue.



Once you create a Google account, you’ll need to name your blog and assign it a Web address.

- On this page, you'll enter a title for your blog. We named our example blog "The Secret Life of Guitarists." You'll also need to enter a URL, or Web address, in the field Blogger provides on this page. If the URL isn't available, Blogger will inform you. Once your blog's URL is set, click Continue.
- Here, you'll select a template for your blog. Blogger provides 12 templates that you can preview and choose from. You can change the template later on, as well as create your own blog design. We selected a Scribe template for our blog. Next, click Continue, and Blogger creates your blog.



With your new blog named, you next need to select a template on which to base the blog's layout.

- Now, either click Start Blogging to begin creating a post or click Advanced Setup Options. The latter



After selecting a template, Blogger.com creates your blog, and you're ready to begin posting.

choice will guide you through options for switching your new blog's address to a domain you already own and have registered, or you can choose to buy a registered domain (\$10 per year through Google), such as www.secretlifeofguitarists.com.

To construct blog posts, Blogger provides a simple publishing interface complete with Posting, Settings, Layout, and Monetize tabs. Other tabs are included for New Post, Edit Posts, and Comment Moderation tasks. To create a new post, click the Posting tab and New Post tab. Here, enter a name for the post in the Title field. Directly below is an empty space in which you'll compose your entry. If you're familiar with editing HTML (Hypertext Markup Language), Blogger provides an Edit HTML view to do so. New bloggers, however, should stick to Blogger's Compose view.

Blogger provides numerous formatting tools to add some zing to posts, including font, type size, text color, pull quote, and bullet point



This main work area is where you'll create blog posts, edit past posts, configure what the blog looks like, determine who can read it, decide whether to display ads, and more.

options. Tools for embedding photos, video, and links are also available. Additionally, a Labels For This Post field lets you enter keywords related to the post to help make it more noticeable to search engines. A Post Options link allows or disallows reader comments. This main work area is also where you'll edit past posts; configure publishing, formatting, commenting, archiving, emailing, and other settings; apply layout elements; and join Google's AdSense program, if interested.

Finally, because you now belong to Blogger's community of bloggers, your account also gets you a Dashboard area where you can enter profile information; configure email and mobile blogging abilities; track blogs you read; read updates and news from Blogger; view blogs in the Blogger community; and access video tutorials, the Help Center, AdSense resources, and other resources.

Blog Or Bust

With your new blog in your online arsenal, all that's left to do is start blogging. Whether you post entries sitting at a desk or while on the move from a smartphone, know that the more you blog, the more comfortable and adept you'll become at doing so. The key is to just get started. ■

BY BLAINE FLAMIG

Terms To Know

Read enough blogs, and you'll come across the following words eventually. Here is a definition for each.

- blog**—short for Web log, blogs originated as online digital diaries that welcomed comments from others. Today, companies, churches, government agencies, retailers, and others reach their respective audiences via blogs.
- blogger**—someone who posts to and maintains a blog
- blogosphere**—an online community of blogs and bloggers
- blogroll**—a list of blogs the blog author thinks highly of or is possibly affiliated with
- microblogging**—a short, quick version of blogging made popular by Twitter
- post**—an individual blog entry

Get the Message:

Today's IM Goes Way Beyond Text

You could argue that the driving force behind modern communications is to convey the most information possible in the least amount of time. The phone trumped the handwritten memo. Email dethroned the phone. Now, it's conceivable that IM (instant messaging) will displace email. Instant messaging is real-time communication, either one-to-one or group-oriented, and it's able to show the status of people in your various "buddy lists." Of course, this describes IM functionality of 15 years ago. The funny thing is that this still describes how many people use IM today, despite the fact that a decade of evolution has brought us an unbelievable array of new features.

Could and should you be doing more with your communications? We're going to look at some of the best of these new features as found in five of today's top IM clients.

Skype

www.skype.com

Early "softphones," such as net-2phone, popularized the idea of free voice calling over the Internet, but slow Internet connections and other issues kept the technology out of the



mainstream for several years. In 2004, though, Skype appeared on the scene with a VoIP (Voice over Internet Protocol) product that not only used a higher-quality audio codec (the compression method used to cram audio data into smaller file packages), but

also a new connection architecture. Whereas older VoIP clients made direct connections between users, Skype could detect if there was congestion between these two points and dynamically route the call through a third Skype user—essentially detouring around the bottleneck. Thanks to its improved quality and ability to make cheap PC-to-landline calls anywhere in the world (SkypeOut), Skype became and remains the VoIP application to beat.

Over the past several product generations, Skype has added a slew of features, including instant messaging. Like many other IM systems, Skype integrates a typing indicator so you can tell when the other person is busy typing a message to you. You can also engage in group IM discussions, much like old IRC (Internet Relay Chat) chat rooms, only now the group can be assembled from people in your contacts list and saved so you don't have to re-create the group manually later. Perhaps our favorite feature in Skype's IM implementation is the ability to edit messages. We all know the embarrassment that can result from sending a message too hastily. Provided all users in the group are using the latest Skype version (4.1 as of this writing), you can right-click an already sent message and choose to edit or delete it.

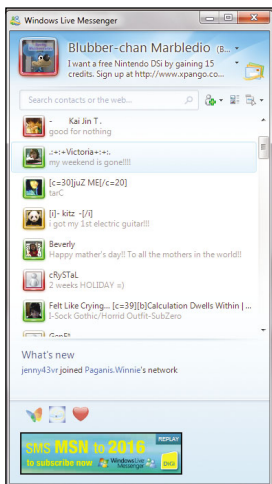
Skype has lots of other goodies, including fully encrypted communications for hack-proof privacy and screen sharing, so people can see what you're looking at rather than burning time describing it to them. There are also versions for iPhone, Windows Mobile phones, and a Skype Lite version for other cellular platforms.

Windows Live Messenger 2009

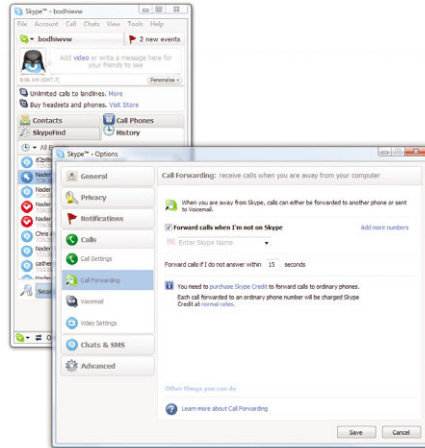
messenger.live.com

The impressive part of Messenger is not the fact that it has video chat, a feature available to Web cam users for years across most major IM clients. Nor are we blown away by its file sharing, text chat, or group capabilities. The Voype service tied to Messenger lets you make Skype-like VoIP calls free to other Messenger contacts or for low rates to landlines and cell phones. The Hotmail integration in Messenger is much like the Gmail integration in Google Talk, bridging email and IM into a more seamless system.

However, what makes Microsoft's Messenger so intriguing is that it represents possibly the best example to date of multiplatform communications convergence. This client may not be the top example of any given feature, but it clearly shows how Microsoft wants to leverage the Live suite of products into an all-encompassing utility for everyday digital life. For example, you can take any photo from Windows Live Photos and drop it right into an IM session to share and discuss with others. Whereas Messenger previously had a Sharing Folders feature for communal file storage, this is now replaced with the cloud-based Windows Live SkyDrive—



Windows Live Messenger may not dazzle, but its multiplatform support foretells of a very integrated future.



Skype's remarkable IM client offers one of the widest feature sets, including voice and video chat, screen sharing, and extra features, such as call forwarding to regular phone numbers if you purchase Skype credit.



If you've got game, Xfire is the way to keep in contact during the in-game frenzy.

25GB of free file storage for every Windows Live user.

Stepping beyond the PC, though, Windows Live Messenger integrates with the Xbox 360 platform (when updated with the spring 2007 dashboard). This lets users not only IM with buddies on Xbox Live but also see their Gamertags in the contacts lists as well as what games they're playing. Hopping from the game platform to the mobile platform, Messenger works with Windows Mobile devices to create a sort of SMS (short message service)-like IM solution. The implementation here is rudimentary at best, but it presages much

broader plans for Messenger in bridging the worlds of desktop, handset, and gaming console.

Xfire

www.xfire.com

Many PC-based games involve multiple players, with contestants either battling or cooperating within a common virtual environment. Not only can players see one another within the game, but thanks to VoIP, they can also hear as well as IM one another . . . sometimes. Normally, when you play a resource-intensive PC game, you have to exit full-screen mode in order to run any other program. This really disrupts the gameplay experience. With an IM platform called Xfire, though, you can press a certain key combination to bring up the IM application's menu from within the game and initiate voice and text chat without ever breaking gameplay.

This feature alone makes Xfire a standout, but it gets even better. You might think of Xfire as the Facebook of gaming, meaning that every member of the service has a profile detailing some of his or her personal information, current games, hours played per game, online status, and so on. Part of your status is what game you're playing, so if you're engaged in, say, Call of Duty 4: Modern Warfare, others in your circle of Xfire contacts can see that and offer to join you.

Other IM clients let you perform voice and video chat sessions, but Xfire lets you capture in-game screen shots and video clips for sharing. You can even broadcast live video of your game for others to view through their Web browsers. If you're stuck on how to complete a map or need other information, Xfire also lets you open up a Web browser within the game.

Xfire now supports more than 1,000 game titles, and the service is free (albeit ad-based). If the client has one weakness, it's that cross-platform support was only available for AIM

If you want an easy, no-cost, ad-free way to support basic IM functionality across virtually every major IM network, Pidgin is the way to fly.

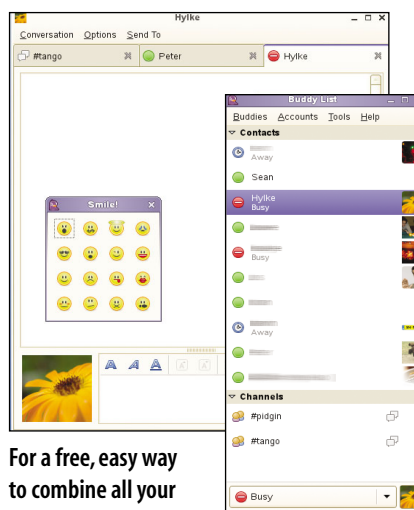
(AOL Instant Messenger) chatting at the time of this writing.

Pidgin

www.pidgin.im

As multiple, competing IM systems evolved from AOL, Microsoft, Yahoo!, and others, users were often forced to keep multiple IM clients open at all times just to be available to all their friends. The first steps in mopping up this interoperability mess came in 2003 and started gathering more speed by 2006. Several industry groups created open standards for messaging, the two most successful so far being SIMPLE (SIP [Session Initiation Protocol] for Instant Messaging and Presence Leveraging Extensions) and XMPP (Extensible Messaging and Presence Protocol). Both of these protocols and many others are now supported within a program called Pidgin, which is available for a dizzying array of operating systems and written languages. In fact, Pidgin natively supports these IM networks: AIM, ICQ, Google Talk, Jabber/XMPP, MSN Messenger, Yahoo!, Bonjour, Gadu-Gadu, IRC, Novell GroupWise Messenger, QQ, Lotus Sametime, SILC, SIMPLE, MySpaceIM, and Zephyr. If that's not enough, there are plug-ins for other systems, including Facebook, Skype, and Xfire. There are also function-oriented plug-ins, such as for IM encryption and updating Twitter with your Pidgin status.

Just as a Pidgin language tends to blend reduced forms of more than one "true" language, Pidgin the program doesn't always carry over the full functionality of the other IM clients it supports. For example, some IM clients support pause and resume functions during file transfers; Pidgin does not. Nor does it support any



For a free, easy way to combine all your IM accounts into one client, Pidgin can deliver.

voice or video chat capabilities. But, if you want an easy, no-cost, ad-free way to support basic IM functionality across virtually every major IM network, Pidgin is the way to fly.

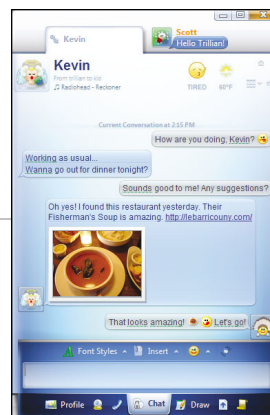
Trillian

www.trillian.im

As we go to press, Trillian is in the last stages of its beta program for version 4.0, also called Astra. Many of the premium features of Trillian 3 Pro, such as support for Google Talk and video chat, are now free in Astra, but there is much more here to check out.

Trillian is moving into the social networking age with integration

Trillian's version 4.0 (Astra) supports everything from secured sessions to social networking and widgets to in-conversation photo and screen capture sharing.



support for Facebook, MySpace, and Twitter, as well as improving support for Google Talk, AIM, Yahoo! Messenger, Windows Live, and Skype. If you're an emoticon addict, you'll love Astra's library of symbols as well as an engine that lets you customize your own. And if you take pride in your status messages, Astra can sync with iTunes, Windows Media Player, or Winamp to show what you're listening to in your status message.

Astra-to-Astra sessions are encrypted for security. During these sessions, the IM client lets you perform inline image transfers, wherein you drop a photo into your IM session, and the recipient can even see a thumbnail preview while the transfer is in progress. We also love the drawing tools that let you send someone a doodle for those times when a picture beats 1,000 words. Premium users get greatly expanded logging features (including search and bookmark capabilities), full-screen video, a Web-based edition of the Astra client for access from anywhere, and the ability to save time by automatically zipping multiple files or an entire folder when dropped into a chat session for sending to someone.

Not least of all, Astra has caught the widget bug. When IMing with another

Astra user, widgets let you see his local time, weather, and business card. Widgets can also work like an RSS (Really Simple Syndication) feed, showing a given public Twitter feed, word of the day, Flickr photos, and so on. If you only have the patience for one IM client, Astra is an all-around, do-it-all favorite. ■

BY WILLIAM VAN WINKLE

A Look Back

In my May column (“The Windows Conundrum”), I shared a few thoughts about a viable alternative to Windows, that being the Linux operating system, and the Ubuntu distribution, in particular. I concluded by asking if you would consider using Linux, instead of Windows, in the future.

The overwhelming majority of replies expressed a willingness to consider Linux as an alternative to Windows, a thought that most of us would not have entertained years ago. Dylan was right: “The times, they are a-changin’.” As a result of your enthusiastic responses, I will periodically provide information about Linux, as it continues to enjoy an ever-increasing presence on computers worldwide—including my own.

Oct. 22 is the currently scheduled date for the commercial release of Windows 7, Microsoft’s successor operating system to Vista. In my June column (“A Peek At Windows 7”), which I’m sure most of you have committed to memory, I shared my initial impressions of Win7. Having now used it for several months, my feelings remain pretty much the same: Win7 is Vista with some new features, most of the bugs removed, and a few aesthetic nips and tucks. It’s nice, but not life-altering.

While Win7 and Linux represent the future, the focus of this month’s column is the past. The catalyst for the following nostalgic musings was a GCP (Garage-Cleaning Project), the initiation of which would not have occurred without Mrs. Modem’s gentle, yet chronically persistent, encouragement. After donning my hazmat suit, goggles, and self-contained air supply, I waddled into the garage and began peering into drawers and cabinets that hadn’t been opened in decades.

The GCP was relatively uneventful until I discovered a treasure trove of 8-track tapes and cassettes, two technological relics of a bygone era—well, three, if you include me. As I wiped the decades from the faded, peeling labels, names of songs and artists emerged that transported me back to the ’60s. I would have enjoyed hearing the surviving tapes, but the appropriate players have long since passed into history.

Reconnecting with my crusty 8-tracks caused me to think about other technologies that were once cutting-edge but are now gone forever. As I sat there feeling ancient, my cell phone rang, jarring me back to 2009.

The ubiquitous cell phone. We take it for granted today, but it wasn’t long ago that the cordless “brick” phone made its debut, followed by the car phone. My first car



phone was a large, hostile intruder, forever affixed to my car—no, wait! That was someone I was dating at the time. I purchased one of the first commercial car phones, and though its cord was perpetually knotted, the constant struggle to untangle it was a small price to pay for the delight of saying, “Guess where I’m calling from. Hello? Hello?” OK, so the connection wasn’t particularly reliable. No need to dwell on negatives.

From car phones, my mind drifted to pay phones.

Have you noticed that pay phones have all but vanished? The reason, of course, is that pay phones are no longer profitable due to the proliferation of cell phones. Pay phones don’t pay. Oh, the irony.

As pay phones disappeared, so did phone booths, which would have posed quite a dilemma for Clark Kent. Call me crazy, but I miss the disembodied, Ernestine-like voice that interrupted calls with, “Your three minutes are up. Deposit an additional 25 cents to continue.” No change, no talk.

When it came to entertainment, who can forget lugable, cement-block-sized transistor radios or drive-in movies? And when was the last time you purchased a set of encyclopedias? At least when we plagiarized material for school reports, we had to manually type them so there was a slim chance we might actually learn something. Today’s young plagiarists need only copy and paste from the Web. Pity.

Record stores are virtually gone, as is the corner service station where a uniformed attendant would greet you; fill your tank; clean your windows; check your oil, water, and tires; and thank you with a set of festive juice glasses while handing you change from a \$10 bill. Sigh.

Those are just a few random recollections of various technologies that have disappeared from the landscape and our culture. Now it’s your turn: What is disappearing from the world around you? Email your thoughts to me at MrModem@MrModem.net, and I’ll publish a synopsis in a future column so we can commiserate together. In the meantime, please join me in a stroll down memory lane at tinyurl.com/3cj8n8. Those were the days, my friends. ■

Mr. Modem (Richard Sherman) is an author, syndicated columnist, radio host, and publisher. “Mr. Modem’s Weekly Newsletter” provides personal responses to subscribers’ computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit www.MrModem.com.

In the Driver's Seat

Know When To Update



57 **Driver Education**
How To Install
New Drivers

60 **Update The BIOS**
Maintain Hardware
Compatibility

64 **Automatic Driver Updates**
Online Services
Keep Things Simple

You've read it in this magazine a million times: Keep your drivers up-to-date. Drivers are software that let your PC's hardware communicate with Windows. Using the latest versions can boost performance, fix bugs, and even add new features so you can do more without having to buy new hardware. Best of all, you get all of these benefits free.

Of course, there are a few things to consider. How do you know if your drivers are already up-to-date, and where do you get new drivers if they aren't? A combination of Windows, a great utility, and the Internet provides all the answers you need.

Do Your Homework

Before scouring the Internet for device drivers, it is important to make a list of the exact makes and models of all your hardware. Sometimes this is printed on the top or bottom of the unit or on a sticker that is applied to it, but in many cases even that isn't specific enough. Try to find the documentation that came with your hardware to find out its specific model number.

Another trick that works with some devices (mainly video cards and multimedia keyboards and mice) is to check the System Tray to see if an icon associated with that device is present. Double-click the icon to see if a configuration window appears or right-click it to see if there is a menu option to call up the configuration window or view the device's Properties. When the configuration window appears, look for a Help menu and click the About option, which often tells you which driver version is installed so you can write it down for later use. Sometimes there is an information page that also tells you the exact driver version currently installed.

The Windows Device Manager is often recommended as a way to determine the makes and models of installed hardware, but it's an imprecise tool that often identifies hardware as generic without providing any further information. Instead, we recommend you

download and run System Information For Windows (free; www.gtopala.com). Click the minus symbol (-) next to Software to collapse that entry, make sure the Hardware and Devices entries are expanded by clicking the plus symbols (+), and expand the entries that match up with those listed in the "Know Your Components" chart in this article. Now, you can select any entry and see detailed information in the right pane. In fact, the information is so detailed that we'll walk you through a device lookup so you know what to write down.

We'll use the Display Adapter entry because display adapter drivers are updated more often than are many other types of drivers. Click the plus symbol next to Display Adapters on the list, and if you see multiple entries, click the one that is associated with a hardware manufacturer (such as ATI, Nvidia, or Intel). From the right pane, write down the Manufacturer name so you know whose Web site to visit for updates. Next, write down the

appear. Having both of these numbers can come in handy, depending on how the manufacturer labels its driver downloads.

Download The Drivers

Armed with your make and model information, it's time to visit the manufacturer's Web site to search for new drivers. Use your favorite search engine to find the manufacturer's site, and when the site loads, look for a Downloads, Drivers, Updates, or Support section. Often, you are asked to enter the model number of your hardware, so do that, check the available driver version and release date against the information you wrote down, and download the latest update that is available. When doing this, be extremely careful to not download drivers for hardware other than what is already installed. If you have a model 400 of something, for example, and you install the model 300 drivers, at best, the drivers will fail to install, and at worst, your hardware will no longer function. Also, create a folder specifically

Some devices (particularly mice and keyboards) have configuration software that also reports the installed driver version.



Description entry, which tells you the hardware's model number.

After that, find the DriverDate value and write it down. Manufacturers often list the release dates of their various driver updates at their Web sites, and you should always download drivers that are newer than the ones currently installed.

Finally, find the DriverVersion and ReleaseVersion entries (if available) and write them down exactly as they

for driver downloads to keep them all handy when you move on to the installation step. To do this, right-click the Desktop or click within any folder, select New, click Folder, and give the folder a name.

One problem when downloading new drivers is that sometimes manufacturers include all sorts of optional software along with the driver, or they wrap the driver in a bigger software package that is used to configure and operate the hardware. The bigger installation packages often come with startup software that loads when the computer boots

and consumes PC resources. If you have an older PC or a slow one that is prone to problems, always go with the simple driver download if that's an option. If you have a modern, fast PC, go ahead and download the entire package, as most software is really useful for getting the most out of your hardware.

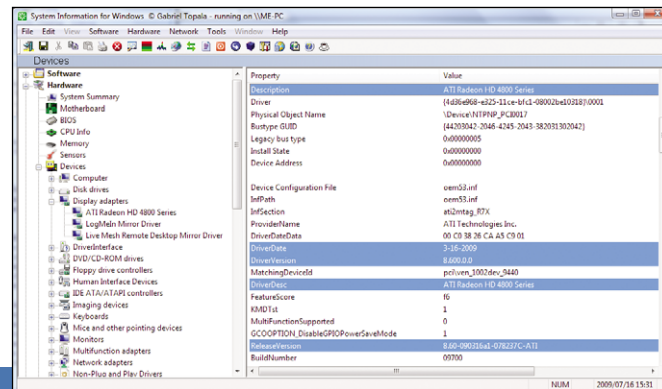
All-In-One

Another option instead of downloading drivers one-by-one is to use a driver download site to grab all of them at once. Many of these sites can automatically scan your computer to determine what hardware is installed and then provide handy links for directly downloading newer drivers either from that site or from the

manufacturer's support site. The downside is that many driver download sites are riddled with adware or are outright scams designed to install malware on your computer, so you really need to know which sites are legitimate. Refer to "Automatic Driver Updates" on page 64 for a guide to these sites.

Now that you have a folder full of drivers, it's time to install them, but sometimes that requires more than just a double-click and a reboot. Be sure to read the next article, "Driver Education," for tips about getting all of these new drivers installed without messing up your tidy Windows installation. ■

BY TRACY BAKER



System Information For Windows tells you everything you need to know about your hardware and drivers.

Know Your Components

Paging through a list of all the components a utility such as Device Manager or System Information For Windows spits out is tedious, especially considering that not all components of a PC use drivers that must be updated regularly. When looking for driver updates, these are the components on which to focus.

Component	When to check	Notes
Digital cameras, camcorders, and music players	Monthly	Better drivers often add editing or music management features.
Display adapters	Monthly	Video card drivers are released frequently and can really boost performance and increase compatibility.
Imaging devices	Monthly	Printers, scanners, Web cams, and similar devices can all benefit greatly from driver updates, so check the manufacturer Web sites often.
Keyboards, mice, and other pointing devices	Every few months	Keyboard drivers tend to remain relatively static, but mouse driver updates are more frequent.
Monitors	Yearly	These are one of the least-important driver updates you can make (the generic drivers included with Windows often do a decent enough job), but check once per year, nonetheless.
Network adapters	Every few months	Network adapters are used for your Internet connection and home network and should be kept up-to-date to ensure maximum performance.
Portable devices	Monthly	Devices such as external hard drives need frequent driver updates, while others such as flash memory cards do not. It pays to check these monthly.
Sound, video, and game controllers	Every few months	Sound hardware can be a drag on overall system performance, so be sure to update those drivers in particular to cut down on processor usage.

Prep Work

and select Continue at the UAC (User Account Control) prompt, if it appears. In the Device Manager window, double-click the category of the device for which you have a new driver, such as Network Adapters. Right-click the device and click Uninstall. In Windows XP, right-click Computer, select Properties, choose the Hardware tab, and click the Device Manager button. Similar to Vista, double-click the device category, right-click the device, and click Uninstall.

uninstaller will remove all traces of the graphics driver and ensure your PC won't mistakenly load an outdated or conflicting driver that could stop your computer from displaying video.

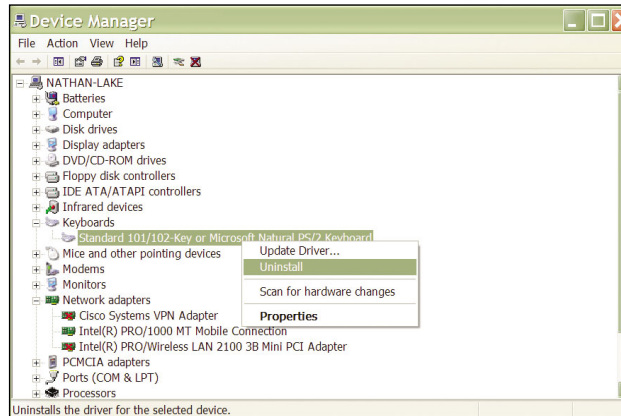
Computer hardware manufacturers often package drivers in a single executable file because it helps reduce the possibility of installing the wrong drivers on your computer. It's also easier for you because the driver utility takes less time to configure the device drivers than it would take for you to manually update the driver. All you'll need to do is locate where you saved the setup file and double-click it. The utility will check what OS (operating system), such as whether your computer runs WinXP or Vista, as well as what version, such as 32-bit or 64-bit, is installed. Once it locates the driver that matches your OS, the utility will install the new device driver. Generally, Windows will tell you that you

need to restart your computer before your PC can start using the new driver.

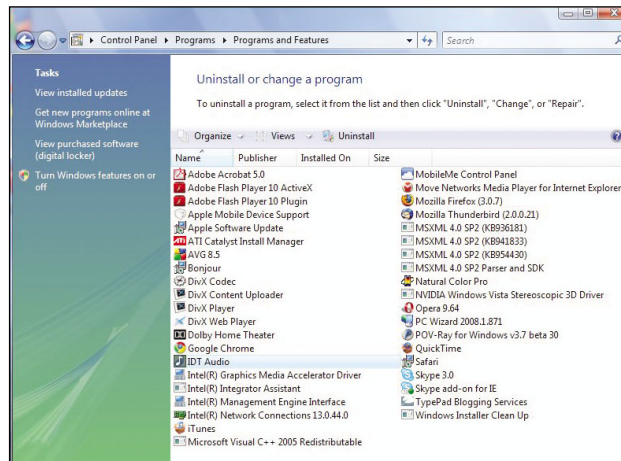
When You've Got Some Unpacking To Do

If the drivers contain a large amount of data, your device manufacturer may choose to compress the files to reduce the amount of time it'll take you to download the file. With zipped files, you'll need an application to unzip the files. If you run WinXP, you can download a trial version of WinZip (www.winzip.com) or WinRAR (www.rarlab.com) that will do the trick. To download the trial version of WinZip, Go to the Web site and select WinZip from the Downloads tab. At the Download WinZip Evaluation Version page, click the Download Evaluation button. Click the Save button and select a location on your hard drive to save the setup file. When the download finishes, click the Run button and then click the Set-up button. You can follow the WinZip Setup Wizard's prompts. Start WinZip, click the Open button, and find the location on your hard drive where you saved the installation file. Depending on the driver, you may extract an EXE setup file or a list of device drivers that indicate what type of OS the file is compatible with.

File decompression applications are also available for Vista, and Vista also offers a built-in utility for unzipping files, so you don't have to download a trial version. To unzip files in Vista, just double-click the ZIP file; Vista will open the files, and the unzipped files appear just like when you double-click a folder to view files. From the folder view, you can copy and paste the files to the folder location on your hard drive



You can remove a device's driver by right-clicking its entry in Device Manager and selecting Uninstall.



You may be able to uninstall a driver using Windows Vista's Uninstall Or Change A Program tool.

that end in the .INF and .SYS file extensions. If this is the case, you may need to tell Windows where to search for the driver files it needs when the New Hardware Wizard detects a component without a functional driver. The best way to bring up the New Hardware Wizard menu is to open Windows' Device Manager, uninstall the device's driver, and restart your PC. When Windows restarts, you should see a balloon in the System Tray (located at the bottom-right corner of the screen).

Next, click the Found New Hardware balloon and select the Install From A List Or Specific Location (Advanced) option, select Next, and click the radio button for Search For The Best Driver In These Locations. Click the Browse button and locate the folder where you saved the driver files. Click the Next button, and Windows will automatically locate the files it needs. Once the driver is installed, click the Finish button, and if necessary, restart the computer when prompted.

where you want to save the drivers. Check out our "Keep A Driver Collection" sidebar for why you should keep an organized list of the current drivers on your PC. If you want to move all the files, click the Extract All Files button above the list of files. Vista will ask you to provide a folder location to save the files, and when it finishes, Vista will open the folder, so you can instantly access the extracted files.

Manual Installation

Although most manufacturers deliver drivers through an EXE setup file, it's possible that the zipped file may contain a list of files, including a few

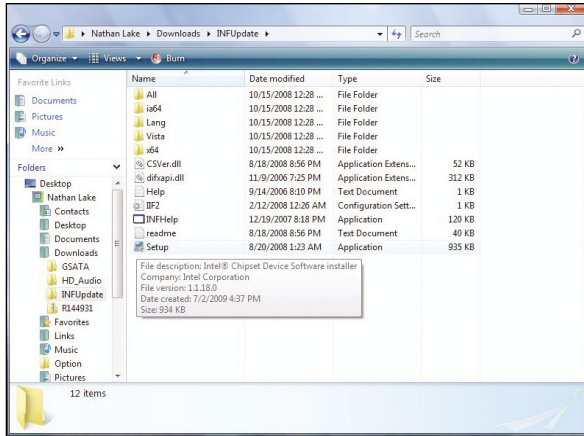
A Walk Through

To thoroughly illustrate what you'll need to do when installing drivers, we'll provide a step-by-step guide for the drivers associated with Gigabyte's GA-EX58-EXTREME motherboard. In this example, we'll assume that you follow the instructions in the article on page 54 to download the drivers, which means that you need to download the Realtek audio driver and Intel's X58 chipset drivers.

Before installing the drivers, we opened Device Manager, double-clicked Sound, Video, And Game Controllers, and uninstalled our existing listing for Realtek High

motherboard_driver_audio_realtek_azalia	7/2/2009 4:32 PM	Application	35,418 KB
motherboard_driver_chipset_intel_5series	7/2/2009 4:36 PM	Application	1,215 KB
motherboard_driver_sata_gb_sata2raid	7/2/2009 4:52 PM	Application	2,858 KB

Many drivers install via an executable setup utility.



Sometimes, you must first unpack all the files necessary to install the new driver.

Definition Audio and High Definition Audio Codec. The Intel chipset wasn't listed in Device Manager, and Windows Vista's Uninstall utility didn't offer a chipset removal tool. We found that Intel's Chipset Software Installation Utility overwrites the old chipset drivers, so Intel doesn't offer a way for you to uninstall the drivers. (Motherboards that feature an Nvidia, AMD, or VIA chipset generally offer a chipset removal utility via a Windows program uninstall utility.)

When installing motherboard drivers, it's generally best to start with the chipset drivers, which typically include all of the hardware built into the motherboard, such as the keyboard, mouse, SATA (Serial Advanced Technology Attachment) ports, and Ethernet port. Thus, we started by opening Windows Explorer and locating where we saved the X58 chipset drivers for the Gigabyte motherboard. Because Gigabyte packages the installation files as a setup file, we double-clicked the Intel EXE file. The driver utility told us that we first needed to extract some files before the installation process could begin, so we clicked the Extract button.

After the files were extracted, we opened the INFUpdater folder the utility created and then double-clicked the Setup.EXE file, which opened up the Intel Chipset Device Software wizard. We clicked the Yes button to accept the terms of Intel's license agreement, selected Next at the Readme File Information window (this told us what steps the program would perform), and clicked Finish to begin installation of the chipset drivers.

Similar to the chipset drivers, the installer for Realtek's

Audio unpacked all the files we needed into a folder on our hard drive. To install the Realtek Audio driver for our motherboard, we clicked the Setup.exe file in the HD Audio folder, which is the folder that was created when we unpacked the Realtek Audio file from Gigabyte. The Setup.exe file started the Realtek High Definition Audio Driver setup wizard, and we followed the wizard's prompts to install the audio driver.

We also installed the monitor driver for our Dell 1707FP, which we downloaded from Dell's Web site as a zipped file. Because our PC was running Vista, we could simply double-click the zipped file to open up the folder, which included INF, ICM, and CAT files. To change the monitor

driver, we opened Device Manager, double-clicked Monitors, right-clicked Generic PnPMonitor, and selected Properties. At the How Do You Want To Search For Driver Software window, we selected Browse My Computer For Driver Software, clicked the Browse button, selected the folder where we saved the unzipped files, and clicked Next. Vista found the Dell driver and automatically installed the monitor driver.

Roll It Back

Although installing the most recent driver typically offers you enhanced features and fixes to problems, it's possible that the new driver introduces a bug that causes your hardware to stop working or produce errors. Fortunately, Windows offers a "roll back" feature, so you can easily return your device to its previous working condition. Open Device Manager, double-click the category for your device, and then double-click the malfunctioning hardware. Select the Driver tab and select the Roll Back Driver button.

New drivers are regularly available for complex hardware, such as graphics, motherboards, and sound cards. On the flip side, manufacturers may never release a new driver for basic equipment, such as mice, keyboards, and monitors. To keep your hardware working at peak condition, it's a good idea to check for new drivers every few months or so, especially for your PC's complex hardware. ■

BY NATHAN LAKE

Keep A Driver Collection

The process of downloading and finding all the drivers for the hardware on your computer can take a while, and if you reinstall Windows, you'll need to reload all the drivers for your computer. To ease the recovery process, we suggest that you save all of your downloaded drivers in one folder on your PC. Additionally, you'll want to back up the drivers to an external hard drive, disc, or flash drive, so you will have a copy that will survive a PC crash.

Update The BIOS

Maintain Hardware Compatibility



For many novice computer users, “BIOS” (Basic Input/Output System) is one of those terms that you hear from time to time but whose meaning is unclear. Ironically, the BIOS is one of the pillars on which your computer stands, controlling many low-level hardware functions.

Most of the time, you never have to think about or configure the BIOS, but on occasion, you need to update, or “flash,” the BIOS. Although it’s not a difficult process, it is a sensitive one, and, done correctly, it can help keep your computer healthy and up-to-date.

What Does The BIOS Do?

The BIOS controls many functions of your computer during the startup process, initializing commands for a bevy of components, including the processor, hard drives, optical drives, memory, and more.

Every computer motherboard has a chip embedded in it that contains BIOS code. When you first turn on

your computer, even before the operating system starts up, your computer accesses the BIOS. At this stage of the startup process, the computer relies on the BIOS to get all the hardware components going and talking to one another. After completing these tasks, the computer will hand off the job of completing the startup process to the operating system.

Without the BIOS, your computer would not work. A fully functioning BIOS is the most important part of your computer, even more so than your operating system. To put it another way, you can access the BIOS and change hardware settings without an installed operating system, but if the BIOS is somehow corrupted or absent, your computer is just a brick.

Benefits

In light of the fact that the BIOS is so important and can so strongly affect your computer, why would you mess with it, ever?

Although BIOS updates are generally infrequently created by manufacturers, they are made available for a reason. Updates can fix bugs or offer patches to keep your computer safe from threats or malfunctions and also help ensure system stability. They can also help improve hardware performance and compatibility.

For example, if you buy a new processor for your system, your motherboard may not have the capability to support it. In response, the motherboard manufacturer may create a BIOS update that contains the necessary code to support the upgrade. Without that update, your motherboard wouldn’t support the new technology.

It’s a good idea to check for a BIOS update periodically and any time you upgrade a component on your computer to ensure your system has the most up-to-date support. But before you go ahead with an update, read the BIOS update’s release notes to determine if it will actually help you solve

or prevent a problem; don't bother with releases that won't help you.

Begin The Update Process

It's important to note that every BIOS is different. In general, however, the same principles apply universally, so with this guide you should be able to figure out the steps to perform an update for your own specific BIOS.

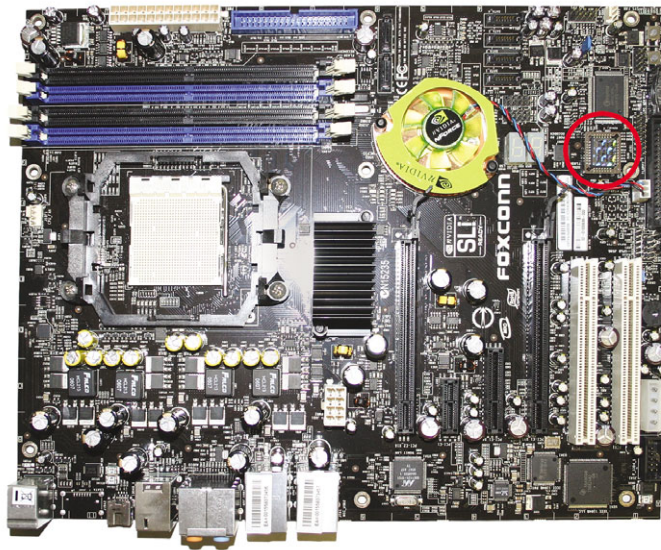
There are different ways to update your BIOS, but whichever way you do it, the process begins with downloading the BIOS update from the motherboard manufacturer's Web site. But before you can download the BIOS update, you need to know which update is the correct one and where to get it.

If you purchased your computer as a complete system, the information you need in order to download the correct BIOS update should be readily available either in your computer's documentation or possibly by using the computer's service tag or serial number. Some systems have a sticker on the case with a service tag or serial number. If you have such a system, locate the number, visit the system maker's Web site, and locate the page where you can search for updates. You should be able to enter the service tag or serial number to find any and all necessary updates.

Alternately, you may need to determine the exact model number of your motherboard. This should be available in your computer's documentation. Once you ascertain the model number, visit the manufacturer's Web site and search for a BIOS update using the model number.

If you built the system yourself or had a friend do it, you'll need to identify the motherboard's model number and acquire the update directly from the motherboard manufacturer's Web site. You should have the motherboard's documentation on hand; check that information to find the manufacturer and model number of your particular motherboard.

In a pinch, you can simply look at the board itself to determine the



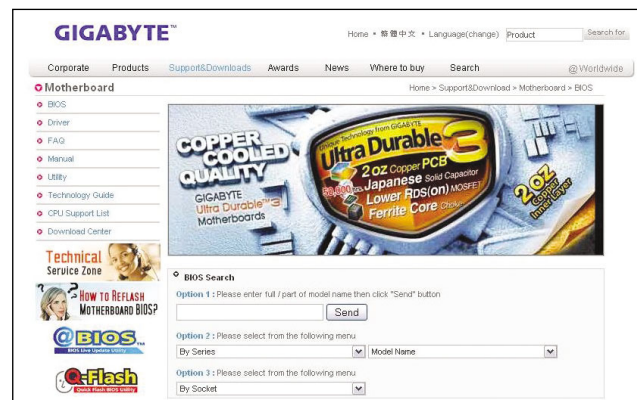
The BIOS (Basic Input/Output System) data is located on a chip on the computer's motherboard.

model number. With the computer powered down and disconnected from its power source, remove the side panel. You shouldn't have to touch anything to find the model number stamped somewhere on the motherboard except possibly to gently move some cables out of the way. Locate the sticker with the motherboard model number on it and write it down. Double-check all cable connections to ensure you didn't jostle anything loose and replace the side panel. Reconnect the computer to its power source and turn it back on.

You can check to see which BIOS version is currently on your computer to ensure that you don't accidentally flash your BIOS to an older version. Restart your computer and enter the BIOS. (In some cases, you can press

and hold the DELETE key during startup; in other cases, it might be F2, or something else depending on the computer. As the computer boots, look for an on-screen prompt with instructions for entering the BIOS.) When the BIOS loads, note the version number, which should be on the main page. Write it down, and then press ESC to exit the BIOS and continue booting the computer.

Armed with the model number and current BIOS version, visit the computer maker's or motherboard manufacturer's Web site and navigate to or search for the support page where BIOS updates are located. Chances are, there will be several updates listed, with the latest ones on the top of the list. You won't need to download all of them; rather, just look for the most recent.



Visit your motherboard manufacturer's Web site, such as Gigabyte (www.gigabyte.us), to locate a BIOS update that can help your computer.

Tools and locate the BIOS update utility. (You typically can't use a mouse in the BIOS; you're limited to the keyboard. Thus, use the arrow keys for navigation.)

(NOTE: For some motherboards, you may need to press a certain key combination to get to the flash utility, such as ALT-F2. In other words, you can't always get to the flash utility directly through the BIOS. However, the instructions from the manufacturer's Web site will tell you if you need to access the utility in a different way and, if so, which key combination you need to press.)

Place the cursor on the BIOS utility and press ENTER. You will then be prompted to navigate to the device and folder where the BIOS update is located. Select the BIOS update file and press ENTER. Wait while the computer checks the file, and then confirm that you do, indeed, want to flash the BIOS. This command will erase the old BIOS and replace it with the new version.

At this point, the computer should automatically restart. If it does so successfully, you're done.

You Can Do It

Despite all our stern words of caution, realize that updating the BIOS is

not at all difficult. Think of it like driving a car: It's easy to do, but you still have to maintain certain standards of care to avoid an accident. Updating the BIOS is very similar in that it's a fairly simple and routine operation,

but you need to be sure you do it right, or you could end up with serious problems. ■

BY SETH COLANER

Update With Bootable Media

There are some occasions when you may need to flash the BIOS a third way, by creating a bootable disk (on media such as a floppy diskette, CD, or USB flash drive) and flashing the BIOS from there.

This is the "old" way of flashing the BIOS, and many computer users are used to it. You won't have to use this method most of the time, but there are occasions when it's necessary. Think of it as a backup plan. For example, if there's an error when you're flashing the BIOS, your computer may be rendered unusable. You will have to boot from a different drive to flash the BIOS, and then you can boot your computer normally again.

First, follow all the same steps outlined in this article to locate the correct BIOS update you need. Next, create a bootable disk. This can be easy or difficult, depending on the manufacturer; your best bet is to consult the instructions that the manufacturer offers.

Regardless of the way you have to do it, you'll need to create a boot disk, copy the BIOS update to it, and change a setting in the BIOS to ensure the computer looks at your boot disk for startup instructions rather than the hard drive with your operating system installed. This is a simple procedure, although it will vary slightly depending on the motherboard. Enter the BIOS and navigate to the area where you can set the boot order. (It should be fairly obvious if you look under each tab.) Move the appropriate boot device entry to the top of the list and save and exit the BIOS.

When the computer automatically restarts, it will boot from the disk you created. Then, you can load the BIOS update, wait for another restart, change the boot order in the BIOS back to your hard drive, wait for another restart, and enjoy the successful fruits of your labor. ■

Tweaks

The BIOS is also the area where power users can adjust hardware settings to gain better performance. This is known as overclocking. Many computer users overclock their machines to increase performance. They accomplish this by adjusting things such as the clock speed and multiplier of the CPU, memory timings, voltages of many components, and more. All of these settings can be altered in the BIOS.

Note that overclocking is not something you should try unless you know what you're doing, as this practice taxes

components beyond factory-acceptable levels and can cause damage. It can also cause your computer to overheat and shut down or not boot at all.

You can easily reset the BIOS settings, but it's important to realize how crucial those settings are to your system. The BIOS is not something you need to be afraid of, but you do need to be exceptionally careful when altering settings in the BIOS. It's not a place where you should play with settings that you don't fully understand. If you do adjust some settings but get into trouble, you can

always exit the BIOS without saving any changes by navigating to the Exit tab and selecting Exit & Discard Changes (or something similar, as every motherboard has slightly different navigation commands).

Further, if you suspect something has gone wrong due to the hardware settings, you can easily load default settings. For many computers, you can just press and hold F2 or F5 during the boot process to load defaults from the BIOS. You may also find a place to do so under the Exit tab. ■

Automatic Driver Updates

Online Services Keep Things Simple



Programs that are seemingly invisible to computer users are actually working hard in the background to keep a PC's operating system running efficiently. Device drivers are part of this behind-the-scenes activity, fulfilling a specific purpose. To be precise, a **device driver** is a small file containing data that the computer needs in order to communicate and control a particular device, such as an optical drive, keyboard, or speakers.

Different programs are assigned to both the PC and the peripheral devices they support. In other words, they all speak a variety of command languages, so the "interpreter" or device driver translates between the computer and the peripherals to ensure that the hardware is communicating properly.

Checking for the latest drivers is critical to enhancing PC features, updating functionality, and preventing or eradicating common bugs. Microsoft and other manufacturers produce new

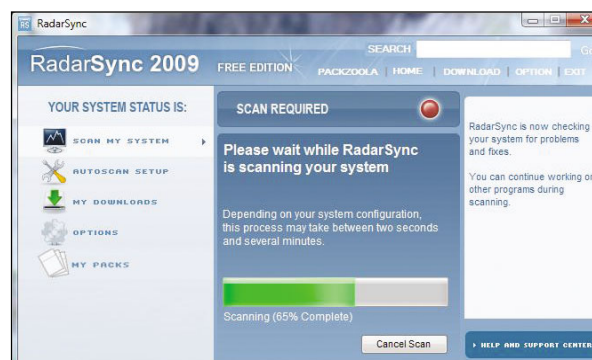
drivers on a very regular basis, and because of this, Windows may require frequent driver updates, especially Windows Vista.

Manually updating your drivers means you'll have to be vigilant with regard to how often updates must occur. You can choose to download an individual driver on a device manufacturer's Web site or use Windows Update (in Vista) to update some drivers, but a popular alternative is to rely on automatic download driver services or programs.

Good Driver Record

In order to determine whether a driver service is best for you, take a moment to consider how often you think about updating device drivers. You could also ask yourself how often you purchase new PC peripherals and components—this is a factor to take into account knowing that you'll need to keep track of multiple drivers for numerous devices.

Most driver services offer similar features, such as system scanning, backup, uninstallation, and update detection. If you know you might be



While RadarSync is scanning your system for necessary driver updates, you can continue working on your computer as usual.

forgetful about what drivers to install for which devices, then a feature-packed version would likely suit your computing style. However, if you're growing as a computer enthusiast, you might want to be more hands-on and use a site that offers a driver search engine (see the "Driver Update Search Engines" sidebar). Pricing for the majority of driver services can vary from free to a one-time fee to a year (or longer) subscription.

In order to download or register with any of the driver update services below, you'll need an Internet connection and compatible browser. Browser and system requirements are listed on the majority of the Web sites. Most driver download sites typically offer an initial free scan that exposes the number of outdated drivers on your system. If you choose to download drivers or use a comprehensive version of the service featuring driver downloads, this step will likely require a service payment. Don't be alarmed at this prerequisite, although it might seem as though the site is asking you to do something unusual. On average, driver software will cost between \$30 and \$70.

Driver Detective

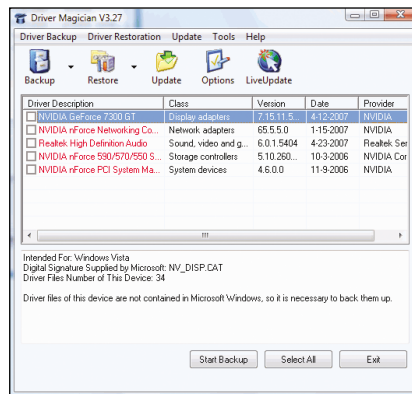
www.drivershq.com

Driver Detective gives you access to millions of device drivers: more than 11,000,000, according to the service. Additionally, it boasts 2,500,000 drivers associated with manufacturers, including Dell, Toshiba, Gateway, and Compaq. As it locates available drivers for devices, it scans your PC with a Driver Scanning Engine. Losing your driver updates won't be a concern—Driver Detective is equipped with a backup wizard to help you copy drivers to a CD, network drive, or USB flash drive. Driver Detective is a free download and requires no subscription.

DriverScanner 2009

www.liutilities.com

Published by Uniblue, DriverScanner 2009 manages and installs the latest drivers in order to renew your system. When scanning for old drivers, it



Driver Magician displays the drivers that require backup. Select the boxes next to the drivers you wish to back up and click Start Backup.

classifies each driver by determining what type of update it requires. The log supplies a history of your driver scans so you're aware of your most recent updates. The interface provides simple usability that doesn't require an exhaustive learning curve. To try DriverScanner 2009, click the Products tab and select Trial Versions. Click the DriverScanner 2009 icon and then select Free Instant Scan under Download DriverScanner 2009 Trial. The trial version of DriverScanner scans for missing or outdated drivers, but it doesn't let



DriverAgent provides Good vs. Bad scanning results, so you can clearly determine which devices require an update. Click the Download diskette icon to update your outdated drivers.

you update them unless you purchase the full version for \$39.95.

RadarSync 2009 PC Updater

www.radarsync.com

The objective of RadarSync is to help your computer run safely and increase its life span by "keeping your hardware drivers and software applications up-to-date at all times." The RadarSync 2009 PC Updater is free, unless you subscribe to RadarSync Premium, which is \$29.95 for a 12-month subscription. This upgrade includes direct downloads for driver updates, tech support, and a scheduler for your updates. RadarSync's database of drivers includes 90,000 files; it searches these and notifies you of the latest available updates. RadarSync also offers a toolbar for Internet Explorer, Firefox, and Safari (available at radar.sync.ourtoolbar.com), designed to provide the latest driver content and alert you of other information.

Driver Magician

www.drivermagician.com

The magical aspect of Driver Magician is very practical in reality: It's a program that backs up, restores, updates, and removes device drivers. Driver Magician takes the time and effort out of searching for the correct drivers and detects the drivers for new hardware by cross-referencing the device with its identifier database. In addition to supporting backup for device drivers, Driver Magician backs up the My Documents folder and the PC Registry. Upgrades and tech support are free, but the initial download is \$29.95 per license.

DriverCure

www.drivercure.com

DriverCure has some unique built-in security features that protect your PC from malicious driver code and lost driver data. To minimize the risk of downloading potentially crippling or fake drivers, DriverCure tackles any problematic drivers. As DriverCure scans your system, it produces a report

of all the outdated or missing drivers needed in order for your peripherals to communicate with your PC. DriverCure supports listings of more than 4,000 software vendors and 3,000 hardware manufacturers. What's more, DriverCure will send you an email notification to update you on the status of newly available drivers. This eliminates any need for you to check for new drivers on your own.

DriverCure's History page aggregates the driver downloads and installed items along with previously installed drivers. The Ignore feature lets you remove items from the scanning list, while the Schedule option lets you set the time of your automatic scans.

DriverCure scans your PC at no cost to check for outdated drivers. To do this, simply click Free Driver Scan on the DriverCure home page. In order to update your system drivers, click the Buy tab to register for the full version of DriverCure, available for \$39.97.

Driver Genius Professional Edition 9

www.driver-soft.com

The Driver Genius interface is inspired by the Windows style and organization, so it should be very familiar to PC users. The program's Driver Download Manager makes it easy to view which drivers are available and how many are required for associated devices. It also informs you of the size of each download.

You can access the Device Diagnostics feature to read the status of the driver. Other facets include Drivers Backup, Drivers Restore, and Drivers Uninstall. Specifically, Drivers Backup compresses driver files into a zipped file, self-extracting file, or auto installer program. If you ever need to restore your operating system, Drivers Restore will reinstall all drivers stored in Drivers Backup. Sometimes, you'll still have left-over or outdated drivers filling up hard drive space—Drivers Uninstall will take care of these useless files by systematically removing them from your PC.

You can download the Driver Genius free trial to get started or purchase one

license (with unlimited driver access) for \$29.95.

DriverAgent

www.driveragent.com

Not unlike the driver update programs we've already covered, DriverAgent patrols for the newest drivers from companies in order to increase your PC's performance and repair glitches. DriverAgent employs a Good and Bad categorization system when scanning your PC, with Good (a green check mark) indicating that your drivers are current and Bad (a red X) signifying an outdated driver for a particular device, network adapter, or other item. To turn the red X's into green check marks, click the Download diskette icon to update the drivers with the latest driver package.

If you want to receive instant updates whenever necessary, you have

the option to subscribe to DriverAgent for \$29.95; otherwise, you can download DriverAgent free with a valid email address. After you've completed this step, DriverAgent will refresh its scan, produce a report, and show you which drivers need an update.

Expert Driver

By now, you should have a grasp on the importance of PC drivers: Consistent driver updates prevent glitches, fix bugs, optimize hardware, configure new features, and generally enhance overall performance. PC and peripheral compatibility will remain fully functional as you maintain regular driver updates—the key is to make sure these occur at the optimal time. ■

BY JOANNA SAFFORD

Driver Update Search Engines

For those who prefer to manually search for required drivers, driver update search engines provide a wealth of driver downloads for your PC components. Whether you need to update a network device, sound card, or USB port, you'll be able to search for specific companies or products.

WinDrivers

www.windrivers.com

Although WinDrivers.com doesn't offer a service that performs a comprehensive scan of your PC's drivers, you can use the Driver Updates section to scour the daily updates that are added to the database. While you're browsing, you can also search the Comprehensive Hardware Manufacturer Directory, Anti-Virus Center, Security Update Alerts, and Networking Center to make sure your PC is protected and updated. The most recent driver updates are listed in the sidebar on the right side of the home page, and links to the manufacturers' sites are readily accessible. To search and

download drivers on this site, you'll need to register with Internet.com.

DriverGuide

www.driverguide.com

DriverGuide is designed for quickly locating drivers, in addition to firmware, manuals, and support utilities. After you register with DriverGuide (at no cost), you can search for drivers by entering a device model name (or number), or you can browse by device manufacturer via the link under the Search field. Free membership lets you download any of the 100,000 member-uploaded drivers and some of the 300,000 staff-uploaded drivers. To add access to the latest drivers and enhanced member privileges, such as the option to choose from more than 650,000 drivers, sign up for DriverGuide Plus (\$34.95 annually) or DriverGuide Pro (\$64.95 annually).

Although DriverGuide is primarily a driver update search engine, it also provides a free system scan that searches for devices in need of driver updates. ■

Search The Tech Support Center!



Newsworthy

Stay up-to-date on the latest entertaining, quirky, and relevant tech news. Check the SmartComputing.com Web log for links to the news items.

Software Reviews

There is a plethora of software reviews at www.smartcomputing.com. Start browsing the reviews by clicking the Software Reviews link on our home page.

Web-Only

Sometimes there's just not enough room in print for all the valuable info the *Smart Computing* team has to offer. *Smart Computing* subscribers can go to www.smartcomputing.com and click Web-Only Articles to read the bonus material.



Computers, printers, and other devices are wonderfully helpful tools—when they're working. But it's frustrating when a computer won't boot up or a printer won't, well, print! The only thing more frustrating is not knowing where to find answers.

Now it's easier than ever to find the information you need by searching SmartComputing.com's Tech Support Center. Simply type a word in the Search box, and you'll find information on that topic from different areas of the Tech Support Center, including Solutions Knowledgebase, Security & Privacy Web Log, Basic Troubleshooting Articles, How To Install, and many more! Topics ranging from hard drives and printers to the Blue Screen Of Death and that pesky Red X are all covered extensively in an easy-to-understand problem/solution format. Accessing this information is simple, here's how:

- 1 Go to SmartComputing.com and click the Tech Support Center link.
- 2 Enter a subject in the Search box and click Search. Avoid using words such as "problems" or "malfunction" and use the Top Subjects links whenever possible.

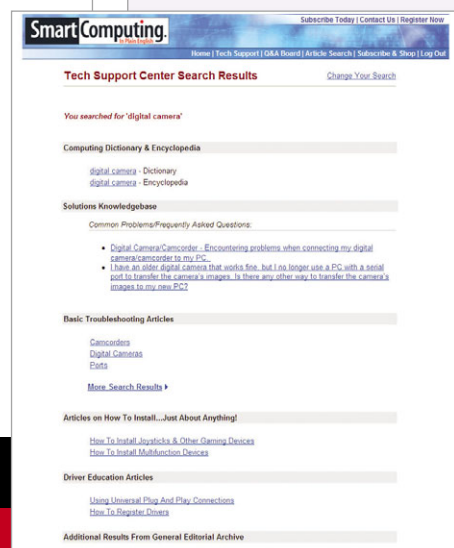
- 3 Read through each section to find numerous articles on your search topic.

Subscribers, keep in mind that you can save all of the articles in your Personal Library to use for future reference. Simply log in and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you like, to keep your information organized and accessible.

From *Smart Computing's* Dictionary

address harvester

An automated program that scans newsgroups and Web sites for email addresses. In many cases, these addresses are used to send unsolicited junk email.



Browsers

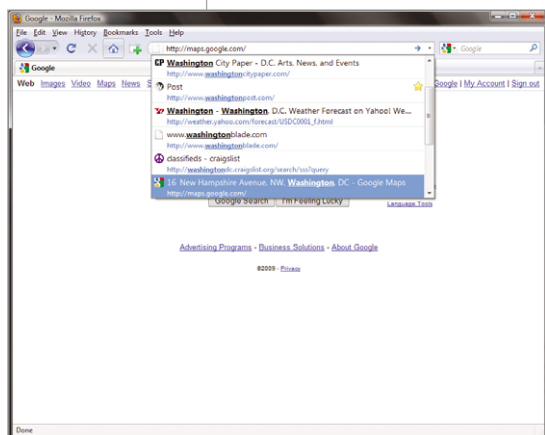
Navigate The Web Via Firefox's Awesome Bar

Firefox 3.5

Beginner

Firefox 3.5, the latest version of the popular open-source browser, sports a long list of upgrades. Among the most notable is enhanced speed, but another is the improved Address Bar. (Mozilla, Firefox's publisher, refers to it as a Location Bar.)

Dubbed the “Awesome Bar” by its developers, the newest iteration of the Address Bar gives you far more than a spot to enter URLs. It can help you navigate the Web in a simple way that makes sense to you.



Firefox 3.5's "Awesome Bar," otherwise known as the Address Bar or Location Bar, lets you navigate the Web by typing keywords.

Type & Go

To get a feel for how the Awesome Bar can help you move around the Web, try it for yourself. Click the Fire-

fox Help menu and choose Check For Updates to verify you have the latest version, or visit www.mozilla.com and download Firefox 3.5.

Once you get the browser running, perform a search by typing a word or phrase into the Address Bar. For now, choose a word related to a site you frequently visit. Firefox begins searching for your keyword in the URLs or page titles of sites in your browser history, the names of your bookmarks, and any tags you've assigned to bookmarks (more on that later). As you type, a list of sites appears just below the Address Bar.

To choose the top choice on a list, just press ENTER, and the browser automatically loads that page. To choose another entry on the list, use the TAB key, arrow keys, or the mouse to highlight the page you want to see.

The site you choose from the list of results will show up higher on the list next time you search for the same word or phrase. The Awesome Bar learns as you work with it, making it easier to quickly find sites using words that make sense to you.

Past Is Present

If no choices appear, it probably means you don't have any bookmarks or browsing history. That

might indeed be the case if you've only started using Firefox or have the history function turned off.

Getting the most effective use out of the Address Bar requires letting your browser learn a little bit about you by tracking your history. Unless you've altered your privacy settings, Firefox probably already keeps track of the sites you've visited. To find out, click Tools, choose Options, and click Privacy.

Firefox 3.5 includes a simplified privacy Options box that makes it easy to configure the browser the way you want. Just use the drop-down menu to finish the “Firefox Will:” sentence. If you choose to Remember History, you’ll be able to easily revisit sites using the Awesome Bar. Selecting Never Remember History, on the other hand, means Address Bar searching will be dependent upon bookmark information you’ve created.

Tag It

The Address Bar is even better at finding your favorite sites when you assign tags or keywords to your bookmarks. To bookmark a page, click the star icon at the right end of the Address Bar. When the outline of the star turns into a solid star, you know the site is bookmarked. Click the solid star to view a small pop-up box with more information about the bookmark, such as the title.

At the bottom of the Edit This Bookmark pop-up box is a spot to list tags. Tags can be any descriptive word or combination of words that makes sense to you. For example, you might tag the Yahoo! Mail site with “email” or *The New York Times* site with “news.”

As soon as you add a tag to a bookmark, that tag becomes part of the library of terms the Awesome Bar searches when you start typing. Following our example above, you just need to start typing “email” in the bar, and Yahoo! Mail likely will show up as the top page choice. All you have to do is press ENTER to go to your Yahoo! Mail page.

The improved Address Bar is a great way to navigate from site to site in Firefox without ever picking up the mouse. Awesome is a big word, of course, and the Firefox Address Bar probably will not literally fill you with awe. It is, however, at the very least, kind of neat. ■

BY ALAN PHELPS

Online

Bing Your Way Through The Web

Bing
Beginner

Microsoft's attempts to cash in on search engine success have, thus far, not gained much traction against the Google goliath. Google's grip on the search engine market is so tight that the name of the site itself has become a verb.

Microsoft isn't quitting, however. The company recently revamped its search site, formerly known as Live.com. You can take the newest Google competitor out for a trial run at www.bing.com.

side. Under that heading, Bing lists several related search topics you might find useful, such as weather, attractions, and a map.

Extras

Bing focuses its attention on a few particular types of searches. From the main Bing page, you'll see links to search Images, Video, Shopping, News, Maps, and Travel. Some of these links, such as News and Maps, call to mind their Google equivalents.

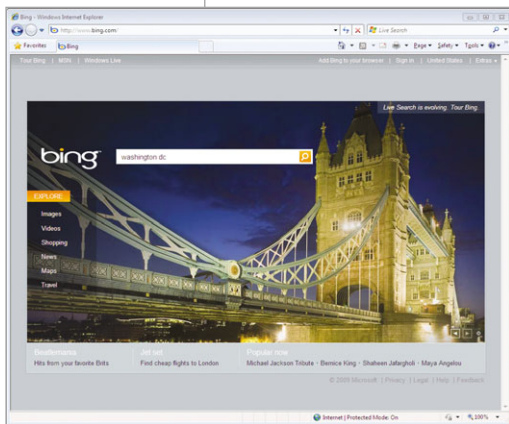
Image search results on Bing are a little fancier than in Google. Rather than click through multiple pages of pictures, Bing sets up a frame in your browser window where you can scroll through all of the image results in one never-ending list. On the left side of the screen, you can filter results to choose particular sizes or shapes of pictures. You can also choose color or black-and-white pictures or pictures with or without faces.

Video searches add another feature. Put your cursor over one of the videos returned in your search, and it will begin to play a preview of that video. Mouse over more than one video, and depending on the layout of the page, they may all begin to play at the same time. To see the full-length video, click the thumbnail of the video you want to watch.

Shopping is the category where Bing diverges the most from a typical search engine. The main Shopping page looks more like a catalog than a standard results screen. Pictures advertise different wares, and the site prominently features its Cashback program that, like MSN Search before it, offers discounts through particular retailers. Search for an item, and Bing displays photos of examples for sale and links to retailers offering them.

Whether Microsoft's efforts to set its search engine apart pays off with more market share remains to be seen. Google works about as well as you can expect when it comes to finding content, and inertia—along with popular services such as Gmail—will probably keep most users googling the Web rather than binging it. Still, a little competition never hurts. ■

BY ALAN PHELPS



Bing is Microsoft's latest take on Web search technology.

Ring-A-Bing

At the most basic level, Bing is similar to Google or any other search engine. Type in your search keywords, and results appear. We were somewhat surprised to see how similar results were between Bing and Google in some of our test searches.

As with Google, results pages in Bing include sponsored links. Sometimes you'll see these small paid advertisements at the top of the results and usually off to the side, as well. Thankfully, Bing follows Google's lead by not using annoying banners or animated ads. Mostly what you get are the search results themselves, presented in a simple and direct fashion.

Bing throws a few extras into the search results page. You may notice a vertical line with a dot in the middle that highlights each result as you mouse over it. Move the mouse pointer toward that line, and a box shows up with a bit of information representing that Web site. On the other side of the page, Bing displays links to what it determines to be related searches. Your search history also shows up on the left side of the screen. You can clear your history or turn off that feature entirely.

The left column also changes to reflect your searches. Bing recognizes some search terms as subjects with many potentially relevant subtopics. For instance, search Bing for "Washington, D.C.," and along with the standard results in the main section of the screen, you'll also see a column labeled Washington, D.C. on the left

Adobe Photoshop Elements 7

Touch Up Palette Overview

Image Processing

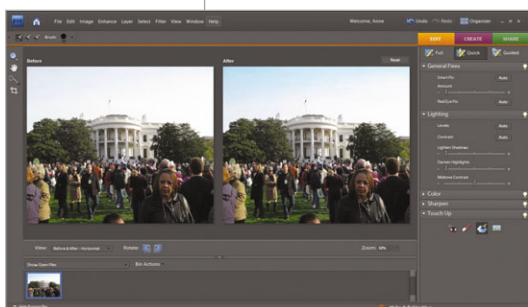
Beginner

WinXP/Vista

Photoshop Elements' Quick Fix tools are designed to provide one-click corrections to your photos. Version 7 organizes some of these tools into its new Touch Up palette.

The Touch Up palette is home to four tools: Red Eye Removal, Whiten Teeth, Blue Skies, and High Contrast. Red Eye Removal, a standard photo-editing feature, is the only quick fix in the Touch Up palette that permanently edits the image. The other buttons apply their respective changes to an adjustment layer instead, so you can

play around without irrevocably changing the original image.



Making dull skies blue can significantly improve the look of your photo.

Open The Workspace

Open Elements, choose Edit, and then use the File menu to locate the photo you wish to alter. In the

main workspace, look to the bottom left for the View drop-down menu. Choose Before & After - Horizontal (or Vertical, if your photo is oriented that way) so you can see the difference as you work.

In the Edit pane on the right, click Quick to reveal the Quick Fix workspace and tools. At the very bottom is the Touch Up palette. If no tools are visible, click the arrow to the immediate left of the words Touch Up. Icons representing the four touch-up tools appear.

Red Eye Removal

Adobe says that Red Eye Removal not only works on red eyes, but it also corrects the green and white eyes that sometimes appear in photos. Whatever eye mishap you're trying to fix, using the tool is pretty straightforward. Click the red-eye icon. Two new adjustments appear in the Options bar, found along the top of the main workspace: Pupil Size and Darken Amount. The default setting for both is 50%, but you can click the arrow and move the slider bar to change the size. Once you're satisfied, drag the cursor around the eye you want to fix in your image or click directly on the eye. When you release the mouse button, Elements automatically removes the red (or green or white).

Pearly Whites

The Whiten Teeth touch-up is a bit hit and miss. With some photos, it might make a significant difference. With others, it may enhance the yellow or do nothing. This is one of those touch-ups that may need more play with some of the options under the Quick Fix menu, such as Color. To try it, click the toothbrush icon and drag it along the teeth in a photo. You may want to adjust the diameter of the brush to match the size of the teeth in your photo. Click the button in the Options bar to do this, just as you did with the Red Eye Removal.

Blue Skies

The third icon is a brush with blue paint partially immersed in a cloud. This is the Blue Skies adjustment, which makes dull skies blue. The photo must have some shading or clouds for this tool to really work. It won't apply blue to a completely white sky—it needs something to grab onto.

Click the Blue Skies button and drag it in the image where you want to add a blue hue to the sky. In our attempts, the Smart Brush did a good job of selecting the sky portion and applying color. If you want a deeper blue hue, click the New Selection button on the Options bar, click the selection (to deselect it), and then redo the Blue Skies process.

With all the touch-up tools, except Red Eye Removal, you can tweak the size of the area you've selected by choosing New Selection or a different button in the Options bar. The middle icon lets you enlarge the selected area while the paintbrush on the right lets you reduce the selected area.

High Contrast

There are times you want to convert a portion of color photograph to black and white, often to make one element pop off the page. The High Contrast button, a small color photo icon, does that with only a couple clicks. As with the other touch-up tools, click the icon and drag the crosshairs over the parts of the photo you wish to change.

The Touch Up palette is really for quick editing. If you want more selective and subtle changes, you'll need to look to the Full Edit workspace. ■

BY ANNE STEYER PHELPS

Microsoft Word 2007

Quick Studies

How-To

Learn To Simplify

Word Processing

Intermediate

WinXP/Vista

With each new version of Word, Microsoft adds new functionality to make it more powerful. But sometimes, as the saying goes, less is more. This is especially the case for people who spend a significant amount of their time writing and want as few distractions as possible. People who have low vision can also benefit from typing on a simplified work space.

There are separate applications for doing this, called “minimalist text editors,” such as JDarkRoom (www.codealchemists.com). You could also use Windows Notepad for a simple editor. The disadvantage of using these applications is that if

you do need to apply formatting or any of Word 2007’s functions, you need to copy and paste the text into Word. Fortunately, you don’t need to abandon Word 2007 to get the same effects as minimalist text editors.

The Simple Way

Take the following simple steps to create a streamlined writing environment for a single document. The most obvious first step in clearing the screen of distractions is to hide the Ribbon. Simply double-click one of the tab names, such as Home, or right-click anywhere on the Ribbon and choose Minimize The Ribbon. Click any of the tab names to bring the Ribbon back temporarily. Double-click a tab name to bring it back permanently.

Word 2007 defaults to Print View, which shows your document as it would appear if printed. Change the view to Web Layout to further simplify the writing canvas. Click the View tab and click the Web Layout button.

Create A Template

You can also create a template that mimics the interface found in programs such as JDarkRoom if you want to have a clean writing canvas available for future documents. Experiment until you find a layout that suits you. The basic process is to follow the steps above, plus change the background and

font color and add the Toggle Full Screen View command to your Quick Access Toolbar.

Click the Page Layout tab and then Page Color. Choose black from the palette. Click the Home tab and right-click the Normal style. Click Modify and change the font to Courier New. The font Lucida Console is also good for this purpose, or you can choose from any that are available on your computer. Next, click the font color drop-down box in the Formatting section and click More Colors. Click the Custom tab in the Colors dialog box and choose RGB for the Color Model. Type in 100 for the red value, 255 for green, and 150 for blue. Click OK to close the dialog box. Back in the Modify Style dialog box, make sure the Only In This Document radio button is selected and click OK. Note that the page color, font, and font color are suggestions. Use any combination that suits you.

You can also add the Toggle Full Screen View button to the Quick Access Toolbar, so you can have a large unobstructed view of your document. Click the Office button, then Word Options, and Customize. In the Choose Commands From drop-down box, choose the selection Commands Not In The Ribbon. Scroll down the list, select Toggle Full Screen View, and click the Add button. Click OK. Now you can click the Toggle Full Screen View button easily. Press ESC to exit this view.

Save As A Template

Now click the Office button again and hover over Save As and choose Word Template. Give the template a file name and save it. The best place to save the template in Windows XP is at: C:\DOCUMENTS AND SETTINGS\<USERNAME>\APPLICATION DATA\MICROSOFT\ TEMPLATES. In Windows Vista, the location is C:\USERS\<USERNAME>\APPDATA\ROAMING\MICROSOFT\TEMPLATES. (These locations differ slightly on your PC, depending on how Word was installed.) If you save the template to the template folder, it will show up as an option when you click Start, New, and then My Templates.

Notice that even though the app looks very different after making these changes, you can still access Word’s functions at any time, making this a better option than using a minimalist text editor. ■

BY TOM HANCOCK

Word 2007 can easily be turned into a distraction-free text editor.



Microsoft Excel 2007

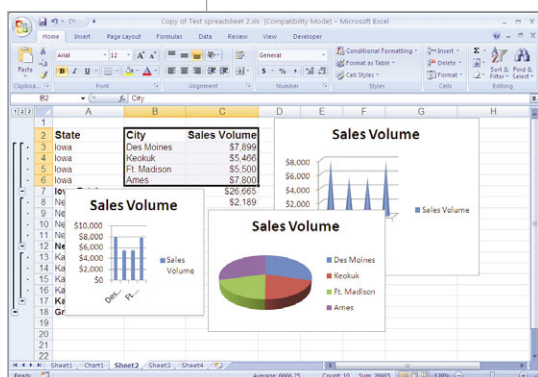
Create Charts: Part I

Spreadsheet

Advanced

WinXP/Vista

Charts are fundamental to using Excel. Most numerical data is easier to understand when it's reported in a visual format that shows comparisons, trends, and more. But many users find charts a little mysterious and frustrating because Excel always seems to throw data into random locations when it helps you create a chart. Charting does get easier with each version of Excel, though, and this month, we'll explain the basics of generating a chart. Next month, we'll cover how to format your chart and address any elements that land in strange spots.



One set of existing data can produce a variety of charts that make it easier to grasp the numbers' message at a glance.

choosing a chart type on the Insert tab. If numbers and labels appear in strange places in charts, it's usually caused by data that's improperly laid out in the worksheet grid. As you experiment with different chart types, you'll learn how to arrange data to work with the chart type you're planning to use.

Excel makes some assumptions about what you want to chart. If you click a single cell and choose a chart type, for example, Excel automatically pulls the surrounding data cells into the chart. If a range of cells includes information you don't want in the chart, you have a couple of options. You could hide the rows/columns before selecting the range. (To hide a row or column, right-click the row number or column heading and choose Hide.) Or you can skip over certain cells as you're selecting the range. Highlight part of the range and release the mouse button. Then hold down the CTRL key and select the rest of the range.

When you're ready to choose a chart, go to the Insert tab and click a chart type. A box drops down to show all the subtypes under Column, Line, Pie, etc. Rest the mouse pointer on a chart type to see a quick explanation of when each chart works best. If you insert a chart, but would like to see the data in a different chart type, Excel

lets you experiment with a different look. Click the chart, click Change Chart Type on the Design tab, and choose a new style. Keep in mind that your data may not be properly set up for a different chart, so the results could look odd. To revert to the previous chart type, just press CTRL-Z.

By default, Excel places the chart on the active worksheet. If you'd like it to appear on a separate worksheet, click the chart and click Move Chart on the Design tab. The dialog box lets you move the chart to its own new worksheet within the workbook or onto an existing worksheet.

Set Your Chart Favorites

As with most software options, you'll probably rely heavily on a handful of chart types, even though Excel offers dozens of options. In fact, you'll probably have just one type that you use all the time for jobs such as generating standard reports each month. In this situation, setting a default chart type can be convenient. To choose a default type, click one of the chart type buttons on the Insert tab and choose All Chart Types at the bottom of the drop-down list. In the dialog box that appears, choose a chart type and click the Set As Default Chart button. Now you can quickly create a chart using the default type by pressing ALT-F1. (To create the chart on its own worksheet, press F11.)

Many times, a chart you design with a lot of customization makes the best template for charts you repeatedly create. The solution here is creating your own template, a technique too many users overlook in a lot of different programs. Plenty of people reuse designs they like by constantly performing a Save As procedure on an existing design and changing all the data in the file. It's far more efficient to make your own template that's ready to accept fresh data. To turn an existing chart into a template, choose the chart and click Save As Template on the Ribbon's Design tab. In the dialog box, assign a name to your new template and click Save. From now on, you'll see the chart available for selection when you click the diagonal arrow in the Charts section on the Insert tab and then click Templates. ■

BY TREVOR MEERS

Microsoft PowerPoint 2007

Troubleshoot Sound & Music

Presentation

Advanced

WinXP/Vista

Sound, especially music, adds an extra emotional dimension to any presentation. But many users get frustrated and give up when sounds either flat-out don't work or act unpredictably. If you are sure that your computer's sound hardware is functioning properly, try the following fixes to help solve the most common sound problems.

I brought my presentation to a conference on a CD, and none of the sounds are working.

This relates to one of the most common PowerPoint sound headaches: The difference between embedded and linked files. Embedded files are part of the presentation and always go along for the ride. Linked files are merely connected to the presentation file, so moving either the presentation or the sounds to other places often creates sound failures.

PowerPoint is fairly rigorous about which files it allows to be embedded. Only sound files that are 100KB or smaller and in the WAV format can be embedded. All other files are linked. When

moving presentations, be sure to copy linked files onto the CD, flash drive, etc. Or use the Package For CD function, which automatically grabs linked files. You'll find it under the Office button and Publish. (You can raise the WAV file size limit all the way

to 50MB by clicking an embedded sound icon and then using the Max Sound File Size box on the Sound Options section of the Ribbon's Sound Tools tab. But this could make for some enormous, and potentially very slow, presentation files.)

To see whether a sound is embedded or linked, click its icon on the slide and then go to the Ribbon's Sound Tools Options tab and click the little arrow in the lower-right corner of the Sound Options section. In the dialog box, look under Information. If you see a file path, the sound is linked. If you see Contained In Presentation, the sound is embedded.

I can't figure out how to make my music start at just the right moment during a slide's time on-screen rather than starting as soon as the slide appears.

When you insert a sound, a dialog box pops up asking whether you want the sound to play Automatically (as soon as the slide appears) or When Clicked (when you click the speaker icon). You can change the sound's behavior at any time by clicking it and changing its settings via the Play Sound drop-down menu on the Ribbon's Sound Tools tab.

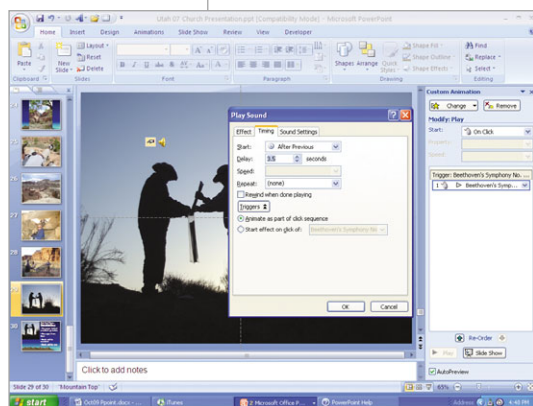
You also can set sounds to play at a specific moment, even if you don't click the icon. Click the Animations tab and Custom Animation. Your sounds appear in the pane on the right side along with the slide's visual animations. Click the sound and then use the Start drop-down box to determine when it plays. You can set it to start at the same time as one of the animations or just after one. You even can set the sound to start after a set number of seconds. Right-click the sound and choose Timing. Choose After Previous and a number of seconds for the delay.

I'd rather not see the speaker icon on a slide.

Click the icon and then checkmark the Hide During Show box on the Options tab. Note that choosing this setting obviously won't work if you were planning to start a sound manually by clicking its icon.

I'd like to play a song directly from a CD, but I want to jump straight to the climactic part of a song rather than sitting through the track's intro.

To play music from a CD, go to the Ribbon's Insert tab and click Sound and Play CD Audio Track. You can pick the track you want to play and choose settings as you would with any other sound, such as starting it automatically, on a mouse-click, etc. (The CD needs to be in your CD drive during the presentation if you're using this feature.) The Insert CD Audio dialog box lets you not only choose a track, but choose the point in the track at which playback starts. Using your CD player's timer, you can find the spot where you want to start the song and enter that time into PowerPoint's dialog box. After you've made your settings, you'll see that PowerPoint inserts a CD icon rather than the usual speaker icon. ■



Put a little more drama into your presentations by adding a stirring musical track set to start at precisely the right moment.

BY TREVOR MEERS

Quick Tips

Secrets For Succeeding In Common Tasks

BY STEPHEN J. BIGELOW

USB Flash Drives

Question: Can I just pull my USB thumb drive out of the PC when I want to take it with me, or do I have to shut it off in any way?

Answer: You can just pull the USB thumb (flash) drive from the PC, but it's not recommended. The operating system and some applications may cache data or establish data pathways to the USB device. If you simply remove the device, those data pathways are broken, and any cached data may not be flushed to the drive. This can result in corrupted or unsaved data.



Use the Safely Remove Hardware option to close any open data paths before removing external devices from the PC.

The best way to handle removing any USB drive is through the

Safely Remove Hardware icon in your System Tray. Just right-click the icon and select Safely Remove Hardware. A dialog box will open where you can select the USB device(s) that will be removed and click the Stop button. Stopping the device will not shut it off physically, but it will close any open channels between it and the operating system. Once stopped, you can power down the USB device (if it's a powered item such as a USB hard drive) and remove it from the USB port. You do not need to "re-start" a USB device if it's reattached later.

Powerline Adapters

Question: I'm using a set of powerline Ethernet adapters, but I can't get one end to work in the outlet that I need to use (it works in other outlets). What can I do?

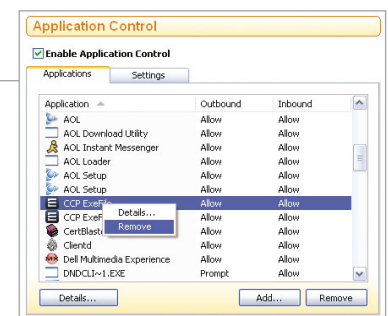
Answer: Ethernet powerline adapters can be very sensitive to the wiring in your home. Mistakes in the wiring or powerline conditioning devices are usually the culprit. First, remove any power conditioning devices at the troublesome end. For example, if you've plugged an Ethernet powerline adapter box into a power strip that is in turn plugged into an AC outlet, remove the power strip and connect the Ethernet adapter directly to the outlet.

If the problem persists, there may be trouble with the AC wiring at that outlet or the way the wiring is routed or interconnected through your home. A licensed electrician can verify the integrity of the wiring and make any necessary repairs, but such repairs can be costly. It may be simpler to just plug the Ethernet powerline adapter into the outlet where it works and use a longer Ethernet cable. You could also exchange cabled Ethernet powerline adapters for wireless powerline adapters or forgo the Ethernet powerline adapters for a centralized wireless network access point.

Firewalls

Question: Why is my firewall application list full of programs that I don't use or that I removed ages ago? How can I update this list?

Answer: Although the firewall will recognize and accept an application that first tries to communicate over the network, the firewall has no way to track the status of that application. If you stop using the application and later remove it from the PC, firewall rules may still readily allow the application. The best way to handle this situation (and keep the firewall list short) is to delete any programs from the firewall list that you know have been removed from the system. This is usually as simple as highlighting the entry in the program list and clicking a Remove button.



Periodically review your firewall application list and remove any applications that may have previously been uninstalled.

File Shredders

Question: What is a file shredder, and why would I use such a tool? Are there legal reasons that I should not use a file shredder?

Answer: A common misconception is that a deleted file is removed from your hard drive. In reality, only the hard drive space used by that deleted file is marked as “free”—the actual data is not removed from your hard drive until it’s overwritten by another file. This is why undelete utilities can be so effective at recovering deleted data. A file shredder is a software utility that overwrites the “free” hard drive space so that any deleted files cannot be recovered.

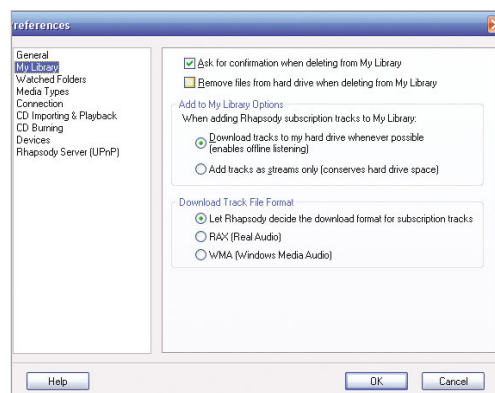
Shredding files is the digital equivalent of shredding old bills, account statements, and any other documents that you wouldn’t want a malicious person to discover. For example, if you plan to donate an old PC to a charity, you would want to be sure that any trace of your Quicken files was scrubbed clean.

In general, it’s fine to “shred” your free hard drive space—unless you are (in the rare position of) deleting files that you know are subject to some legal action. It’s best to consult with an attorney if you have any concerns or questions about the legal implications of digital information.

Audio Files

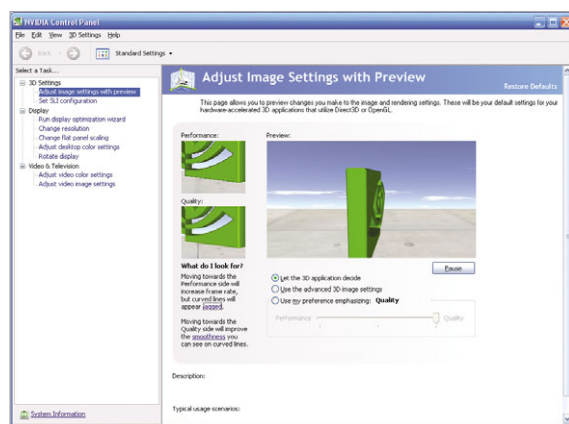
Question: If I delete a tune from a music service such as Rhapsody, will that file also be deleted on my hard drive?

Answer: A file removed from your music service library is typically not deleted from your hard drive unless you locate that file and delete it manually. However, music programs such as Rhapsody provide an option to automatically delete any removed files. For example, with Rhapsody running, click Tools, Preferences, and select My Library from the left menu. Check the Remove Files From Hard Drive When Deleting From My Library box and click OK to save your changes. Now removed files will be deleted from the drive.



Tell music services such as Rhapsody to delete tunes from your hard drive when you remove them from your playlist.

Desktop Managers



The Desktop managers included with video adapters offer convenience and control but are usually not needed for everyday graphics control.

Question: Do I really need the Desktop manager software that installed with my new video drivers, or is this just more software clutter?

Answer: The Desktop manager installed with your new video adapter typically offers control over basic display settings, such as resolution and color depth, along with advanced controls over antialiasing and a wealth of 3D performance factors.

Generally, you do not need to install the Desktop manager software. In most cases, you can skip the Desktop manager installation when you install the drivers or simply exit the manager by right-clicking its icon in your System Tray and using the Exit option. Similarly, you can remove the Desktop manager through Windows XP’s Add Or Remove Programs utility (Uninstall Or Change A Program in Windows Vista). You can always reinstall the Desktop manager software, if needed later, from the CD (or by downloading the latest version from the manufacturer’s Web site).

Digital Camcorders

Videotape is nearly a bygone in consumer camcorders. A few manufacturers still sell one or two miniDV (digital video) tape models, but they're in the back of the store, right next to the tube TVs and VCRs.

The overwhelming majority of today's camcorders seem to record to anything but tape.

Instead, they use computer-related storage media such as flash memory, DVDs, and hard drives. Even BD (Blu-ray Disc) camcorders are available, albeit mainly in Japan. It's just one more example of the way that the PC has influenced CE (consumer electronics).

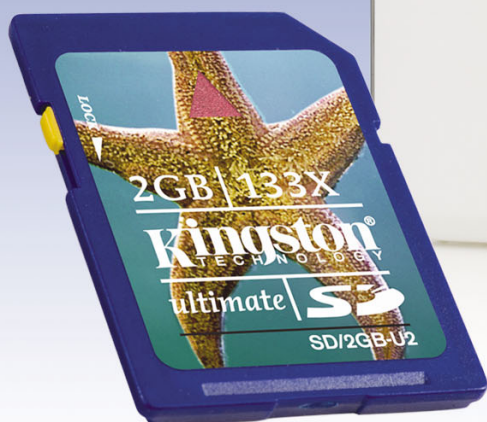
Flash Camcorders

These are rapidly becoming the most popular style of consumer video cameras. They store footage on flash memory, which can be internal (permanent) and/or removable, such as SDHC (Secure Digital High Capacity) memory cards.

Flash cams are catching on because of their light weight, ruggedness (few moving parts), and potentially long battery life. They range from high-end, high-def models to budget-priced impulse buys. The more memory they have, the longer they can record.

Virtually all camcorders can connect directly to most TVs using included cables for video playback. Also, most have USB connections for offloading footage to a computer, which will let you move it to YouTube, DVD, a mobile device, or another destination. A suitable memory card reader will work, too, as applicable.

If your flash camera uses internal memory, you'll either need to offload your video, delete it, or record over it when the storage space is full. However, if the cam takes memory cards, you can swap in an empty one and keep on shooting.



Flip UltraHD; \$199.99; www.theflip.com

Kingston SDHC Ultimate; \$32 for 2GB; www.kingston.com

Hard Drive Camcorders

It hasn't escaped electronics manufacturers' notice that hard drives just keep growing in capacity. Furthermore, they're available in physical sizes small enough to fit in iPods, cell phones, and camcorders. The big advantage of HDD (hard disk drive) cams is their ability to record for a long, long time.

Like internal flash memory cameras, HDD camcorders are meant to transfer their footage to a computer through a cable. A few have supplementary memory card slots, which are mainly used to store any still photos you happen to take.



JVC GZ-HD300A; \$699.99; www.jvc.com



Verbatim miniDVD-R discs;
\$19.99; www.verbatim.com



Panasonic VDR-D310;
\$699.95; www.panasonic.com

DVD Camcorders

Technically, these are miniDVD cameras, as they use 3-inch (8cm) discs instead of the 5.25-inch ones we're all used to. Write-once miniDVD+Rs and miniDVD-Rs will let you record about 20 minutes of high-quality footage per side, and almost double that for DL (dual-layer) discs. For re-recording to the same medium over and over, there are rewritable miniDVD+RW and miniDVD-RW (check for compatibility).

Like memory card- and tape-based camcorders, DVD cams let you change media as they fill up. Moreover, most DVD and BD players will play camcorder miniDVDs just fine.

Digital Cameras

Just as most camcorders moonlight as fair-to-middlin' still image cameras, so, too, do most digital cameras have the ability to record short movie clips. Most such clips are limited to DVD resolution (720 x 480 pixels) or less. However, a few upscale "prosumer" digital cameras and D-SLR (digital single-lens reflex) models can shoot video in 720 (1,280 x 720) or 1080 (1,920 x 1,080) high definition.

Even cell phones are in on the video recording act. Mind you, their tiny imaging chips and lack of optical zoom make them poor substitutes for a real camera or camcorder.

Nikon D5000; \$729.95; www.nikonusa.com



What To Do When Windows Requires Reactivation

With the release of Windows XP in 2001, Microsoft introduced users to a new process—activation. To guard against software piracy, Microsoft devised activation as a means of determining whether your copy of Windows is being used in a manner consistent with its license. It does this by examining and recording your hardware structure and associating it with your product key. It periodically checks this association. If it finds certain components not originally associated with that key (such as a new motherboard), it calls for new activation.

When you install WinXP or Windows Vista, the Setup program starts a 30-day countdown during which you must activate your OS (operating system). It reminds you periodically of the need to do this. Many users activate their OSes and move on without a glitch. Others never see these messages because their PCs come from the manufacturer with Windows installed and preactivated. A percentage of users later discover that they have lost their activated status and need to activate the product again. This article will detail how that happens and how you can resolve the problem. (*NOTE: Windows validation is a related, but different, process. We'll discuss that briefly at the end of this article.*)

Under The Covers

When you (or your original equipment manufacturer, if you bought your PC with Windows preinstalled) activate WinXP/Vista, an applet in Windows examines eight hardware



categories—your video display and network adapters (interface cards or chips), system memory (RAM), processor, hard drive, and optical drive as well as SCSI (Small Computer System Interface) and IDE (Integrated Drive Electronics) adapters (both of these are connection points for external devices) if you have them. It notes such details as the amount of RAM installed; the processor type and

serial number; and the MAC (media access control) address, a unique identifier that is assigned to most network adapters.

During the activation process, the applet records the information it obtains on each of these devices (the first one of each if you have more than one). It then calculates an encrypted installation ID linked to your PC's device information and sends this

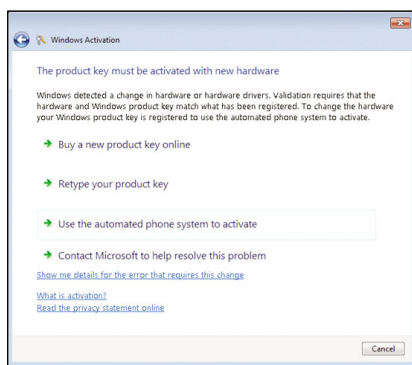
information over the Internet to Microsoft. In WinXP Service Pack 1 or later, it also sends the actual product key you provided at setup for comparison against known, pirated keys. If the product key is valid, Microsoft associates the key with the installation ID linked to your PC's hardware

If you skipped activation the first time out and did not select the automated activation option, you can start the activation process manually. To start the process in WinXP, click Start, All Programs, Accessories, System Tools, and Activate Windows. In Vista, select Computer from the

stored activation file. This commonly occurs when system troubles force you to reformat your hard drive and/or reinstall Windows. Because both of these options result in your old Windows installation being overwritten, the old activation files stored there are also wiped out. When you



If you wait too long to activate Windows, you'll see a display notifying you of reduced functionality until you complete activation.



If you have installed new hardware and Windows cannot activate your system automatically, it will prompt you for reactivation.



At least one Trojan can spoof the reactivation request; note that it requests credit card info and doesn't include a number to call.

configuration and sends a confirmation code back to your system.

If your PC cannot connect to the Internet to activate, or if you do not want to activate that way, Microsoft gives you the option of calling a Microsoft agent to complete the activation process. After providing the agent with the installation ID generated on your system, that person supplies you with the code to activate Windows.

If you do not activate WinXP/Vista within 30 days of installation, Windows won't work properly, making general operation cumbersome, if not impossible. (The lockdown varies between WinXP and Vista, but the effect is essentially the same.) This feature is built into Windows, so the function limitations will occur whether or not you connect to the Internet during that 30-day period.

Start menu, click System Properties on the toolbar, and in the Windows Activation area, select Click Here To Activate Windows Now. (If you have come to this article because you cannot activate Windows Vista initially, refer to support.microsoft.com/kb/931276 for assistance.)

How Trouble Starts

Even if you activate your system properly, a variety of issues can require you to activate Windows again. Depending on how they are generated, the notices may give you 30—or only three—days to activate. Consequently, it's a good idea to know, in advance, what causes these issues and how to resolve them.

One way users deactivate their systems is inadvertently erasing the

reinstall, you'll be prompted to reactivate the system. (You'll have 30 days.) Normally, Windows can navigate this process without incident, assuming your underlying hardware structure hasn't changed.

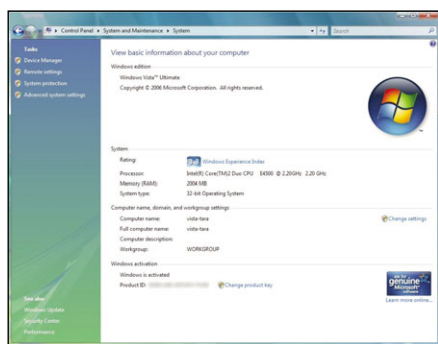
Sometimes, Windows balks at the reinstallation, especially if you have reinstalled Windows a number of times. You can install WinXP three times, and a retail version of Vista five times, before the system will stop activating over the Internet. However, you can still activate by phone using the number you see at the activation prompt. Just explain to the agent that you performed a clean system install.

A second means by which users deactivate their systems is by making too many or too frequent hardware changes. If you have made multiple upgrades (for example, your video card,

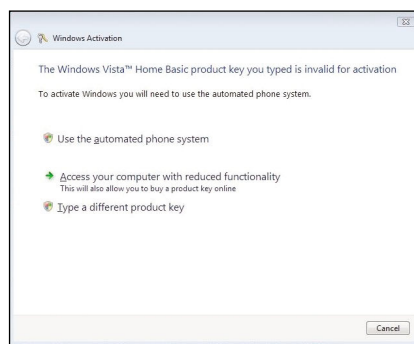
memory, and network adapter) since initial activation, you could find yourself in trouble. Some major hardware upgrades, such as switching out a motherboard, are by themselves enough to make Windows balk. Any major change will signal a need for re-activation. (In the early days of Vista,

Beyond The Norm

In some cases, users don't make any changes to their hardware, and yet, upon reboot or during normal operation, they see a message that Windows requires activation. One prime reason for this is a malware



Look in the System Properties area in Vista to confirm that you have activated your operating system.



A product key that is invalid or has been compromised by malware will prevent activation, but you should be able to contact Microsoft by phone.

users reported that even updating hardware drivers reset their activation.)

If this happens, you'll see an activation prompt upon reboot, and you will have only a three-day grace period in which to accomplish this task before Windows becomes crippled. Because you've changed your hardware configuration, you may not be able to reactivate over the Internet. (Vista is better than WinXP about figuring out that it is seeing an altered, but essentially intact, system.) If the prompt suggests phone activation, your best choice is to follow this method.

If you cannot get through, you'll have more work ahead. Vista users have reported that trying Internet activation repeatedly may eventually work. You can also contact Microsoft Tech Support (support.microsoft.com), but it may take a fee-based phone call.

infection. Viruses, rootkits (programs that secretly usurp administrator privileges), and other bugbears can corrupt your activation files.

Furthermore, in 2007, security provider Symantec reported that a Trojan (a malicious program that you install unwittingly) called Trojan.Kardphisher presents a screen reporting your PC is not properly activated. If you proceed through the reactivation process, which requires you to provide personal information, your private details will be compromised.

If you have not made hardware changes or reinstalled Windows, you should run a malware scan immediately to ensure you are not infected. If your security software does not detect anything, or if you do not have security software, run an online scan. BitDefender (www.bitdefender.com),

Panda (www.pandasecurity.com), and other companies offer free online scans. Some, including BitDefender and Panda, will even fix your problems at no charge the first time out.

Moving Up & Out

What if you are upgrading your version of Windows or moving it to a new PC? A licensed upgrade will come with a new product key and will generate a fresh activation code and files, so you will likely be able to activate normally.

Moving your Windows installation to another PC will set off the same red flags as hardware changes, because you have truly changed the hardware. If you call Microsoft and explain that your old PC crashed or is no longer in service, the agent may provide you with a new activation code. Wipe the hard drive on the old PC (unless it is toast) before you dispose of it. Otherwise, you could put your current installation in jeopardy.

Final Thoughts

Reactivation of Windows, especially by phone, can be tiresome but generally is not difficult. The trick is to ensure you need to do it and then perform it on a timely basis. It is important, however, to be clear on the difference between activation and validation. Validation ensures your product key is valid. If Microsoft cannot validate your product key, it will likely spur and then prevent activation, as well. (In this case, you will see an error message that states something like "The Software Licensing Service reported that the product key is invalid.")

Malware can also corrupt your product key, making it impossible for you to reactivate. If this occurs, you'll need to contact Microsoft Support for assistance, especially if you only own an OEM (original equipment manufacturer) version of the software. ■

BY JENNIFER FARWELL

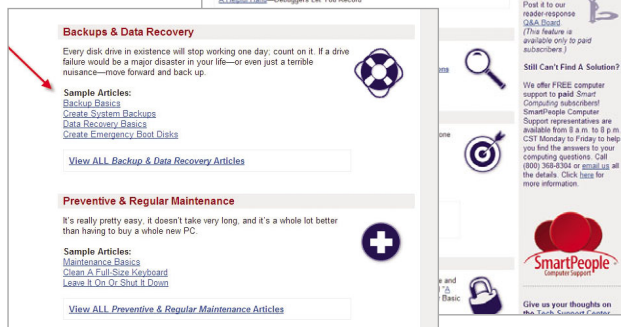
Backups & Data Recovery

We all know how important it is to clean out our computers to keep them running smoothly. But it's just as important to back up your computer. Think about all of the important information on your computer: The pictures of your grandson's baseball game. Your tax records and other financial information from the past five years. All of the music you spent hours downloading. Now, imagine all of that information disappearing. Scary, huh? Backing up your system can prevent future problems and will save you a lot of time and stress.

Find all the backup information you need at SmartComputing.com's Tech Support Center. The Backups & Data Recovery section is full of articles on how to back up your system and how to recover valuable lost information. The articles cover basic computing language, the tools you'll need to back up your system, and how to avoid losing data. Check out these great articles in the Tech Support Center at SmartComputing.com today!



- 1 Go to SmartComputing.com and click the Tech Support Center link.
- 2 Click the Backups & Data Recovery link.
- 3 Search articles to find all the backup information you need. Subscribers, be sure to log in so you can add the articles to your Personal Library.



Broadband Use Grows

As of April 2009, 63% of adults in the United States have high-speed Internet access at home, reports the Pew Internet & American Life Project. One of the fastest-growing groups is senior citizens: 30% use broadband.

Mobile Content Popular

Frank N. Magid Associates recently reported that half of U.S. mobile phone users access mobile content, such as games and weather reports, at least once a week.



Searchers Look To Bing

Data from comScore shows that Microsoft's new search engine, Bing, has gained popularity in its early days. A few weeks after its debut, Bing claimed 12.1% of search result pages.

SmartComputing.com's Daily Tip

Display The IE Address Bar List

To quickly display the Address Bar list in Internet Explorer, press F4. You'll see a list of previously entered URLs, so you can quickly backtrack to a site you visited earlier.

How To Fix Common Problems With OpenOffice.org

Back in the summer of 1999, Sun Microsystems purchased a German company called Star Division. One year later, StarOffice 5.2 was released, and people started talking about a cheap competitor to Microsoft's Office suite. After the release of StarOffice 5.2, Sun released the source code to StarOffice, and OpenOffice.org was born. StarOffice is still available, for a fee. The two programs are built on the same code, but buying StarOffice gives you a few more features and significant support and training. OpenOffice.org has an extensive community of support, too, and continued improvements make it a plausible alternative to Microsoft Office. The fact that OpenOffice.org is a free download makes it all the sweeter.

No piece of software, however, is perfect, and OpenOffice.org has its quirks. We've listed some of the most common OpenOffice.org problems below, but we'll start by walking you

through how to install and uninstall OpenOffice.org.

Installing OpenOffice.org

OpenOffice.org has fairly modest system requirements, but you will need Windows XP or newer, 256MB of RAM, and 650MB of free space for a default installation. If you meet the requirements, you can download the latest version (OpenOffice.org 3.1) from www.openoffice.org. Click I Want To Download OpenOffice.org and then click the Download Now button. OpenOffice.org 3.1 weighs in at about 148MB and is a painless download if you have a broadband connection.

The installation files come in a self-extracting .EXE file to make for a smaller download. After the download completes, run the .EXE file and select a temporary directory for unpacking the installation files. By default, the installer

places this temporary directory on your Desktop, but you can place the temporary file anywhere by clicking the Browse button and selecting a different directory. Click the Unpack button to proceed and begin the installation.

Once the installation files are unpacked, the installation wizard opens. Click the Next button and provide a User Name and an Organization name if you'd like.

Click Next to proceed and select the types of components you want to install. It's easiest to opt for a Complete install here, but if you only want to install certain OpenOffice.org components (for instance, if you don't need presentation software, you can opt not to install OpenOffice.org Impress), you can select Custom instead. The final step is to click the Install button.

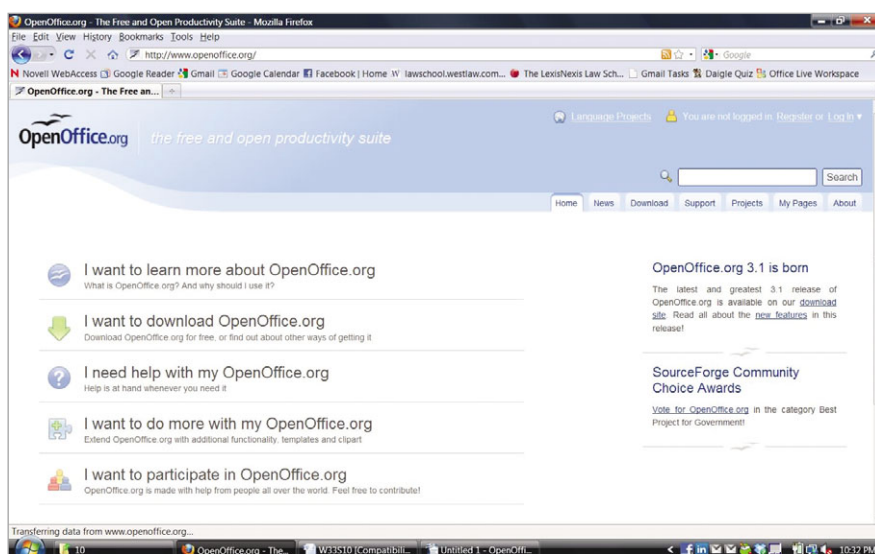
If you have problems during the install, check the Installation Problems section of this article for common errors and possible solutions.

Uninstall OpenOffice.org

When you're having problems in OpenOffice.org that aren't identified here or our solutions don't seem to work for you, the solution of last resort is to uninstall OpenOffice.org and try a fresh reinstall. In WinXP, click Control Panel in the Start menu. Double-click Add Or Remove Programs. (If you don't see an Add Or Remove Programs icon, click Switch To Classic View in the upper-left corner of the Control Panel.) Scroll through the list of installed applications, select your version of OpenOffice.org, and click Uninstall. In Windows Vista, click Control Panel in the Start menu. Under Programs, click Uninstall A Program. Click your version of OpenOffice.org and click the Uninstall button.

Installation Problems

Installing OpenOffice.org isn't usually a problem, but issues can crop up.



Downloading OpenOffice.org shouldn't be a problem if you have a broadband Internet connection. Click I Want To Download OpenOffice.org and then click the Download Now button that appears.

Potential problems could involve anything from the installer tripping over security applications to incomplete or corrupt downloads.

Problem: A problem occurred during installation of OpenOffice.org. Error messages may relate to a corrupt download package, a missing library, or general installation problems.

Solution: Start by restarting your PC and trying again. If this doesn't work, disconnect from the Internet, disable any antivirus software, and try the install again. If you still have issues, boot into Safe Mode and try installing again. To boot into Safe Mode, press F8 right before Windows begins to boot and select Safe Mode from the boot menu.

If none of the above works, then the installation package is likely corrupt. If you have a broadband Internet connection, download the installer again.

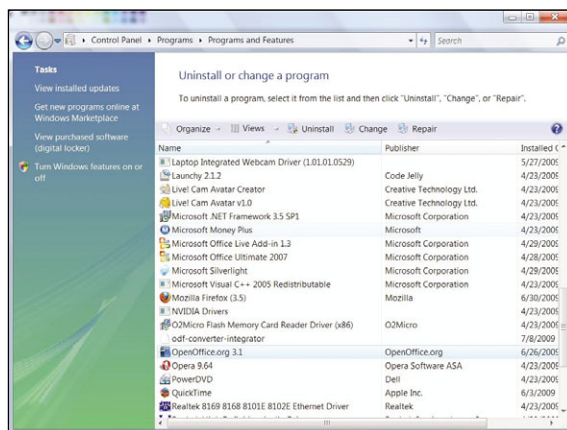
First Run

In some instances, installation may proceed without a problem, but you may encounter issues when you try to run OpenOffice.org. Some common problems and solutions are below.

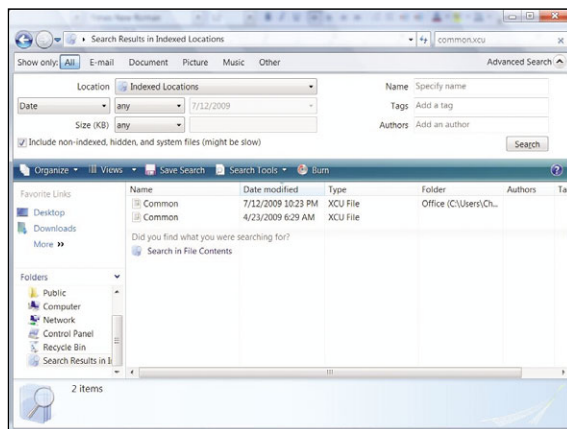
Problem: When you start OpenOffice.org, you get this error message:

OpenOffice.org can not be started due to an error in accessing the OpenOffice.org configuration data. Please contact your system administrator. The following internal error has occurred: Get Storage: "No Content."

Solution: According to OpenOffice.org, this problem seems to occur often (or often enough) in Windows, especially where OpenOffice.org crashed or otherwise didn't exit properly. The cause is a corrupt Common.xcu file. To fix the problem, you must first locate this file.



If you need to uninstall OpenOffice.org in Vista, open the Control Panel, click Uninstall A Program, select OpenOffice.org 3.1, and click Uninstall.



If you get an error message that reads "Get Storage: 'No Content,'" you'll need to search for and rename Common.xcu. The next time you start OpenOffice.org, it will create a new configuration file.

It's easiest to use the Search feature, but you may have to make a few changes for it to work effectively. In Vista, click the Start menu and type **common.xcu** in the Start Search field and then press ENTER to open a Search Results window. Click the down arrow near the top-right side of the window next to Advanced Search. Checkmark Include Non-Indexed, Hidden, And System Files (Might Be Slow) and click the Search button.

In WinXP, click Search in the Start menu, click All Files And Folders, and then click More Advance Options. Place a check mark in the box

next to Search System Folders and Search Hidden Files And Folders. Now search for **Common.xcu**.

Once you've found the file, check the file path. You're looking for a file that *does not* include Shared in its file path. When you find the right one, right-click the filename and select rename. We recommend adding .old to the file name (making the new filename Common.xcu.old). When you reopen OpenOffice.org, it should create a new Common.xcu file and everything should work properly.

Problem: Openoffice.org doesn't start.

Solution: There are a variety of possible reasons for this, but we have some common solutions for you. Start by killing any OpenOffice.org running processes. In WinXP and Vista, press CTRL-SHIFT-ESC to open the Windows Task Manager. In the Task Manager, click the Processes tab and click the Image Name column to sort running processes by name. Scroll down to find any running processes named Soffice (likely either Soffice.bin or Soffice.exe). Select these processes and click the End Process button to kill.

Next, reboot the computer.

When the computer turns back on, disable any security applications and try opening OpenOffice.org again. If it opens with no problems, close it and start running your security applications. Try opening OpenOffice.org again. If it doesn't open, you may need to replace that security application.

Problem: Every time you start OpenOffice.org, you're asked to register the software.

Solution: The first time you run OpenOffice.org, it will ask if you'd like to register the software. You can opt not to register it if you wish. Once you've registered or decided not to

register, the software is not supposed to ask you to register again. If you're being prompted to register every time OpenOffice.org starts, make sure you're answering the request (and not simply closing the dialog box). If you're answering the prompt, then there is a problem with the Common.xcu file.

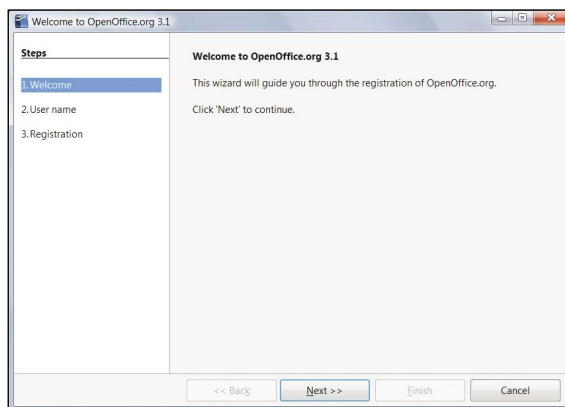
The most likely problem is that, for some reason, OpenOffice.org cannot write to the Common.xcu file. This may be because the directory permissions are not correct or the hard drive on which the file is stored is full, but more likely, OpenOffice.org is just not writing to a file correctly.

We recommend a quick file edit by hand. In Vista, click the Start menu, type **common.xcu** in the search field, and press ENTER. Click the down arrow next to Advanced Search in the upper-right corner of the search window, check Include Non-Indexed, Hidden, And System Files and click the Search button. In WinXP, click Search in the Start menu, click All Files And Folders, and then click More Advance Options. Place a check mark in the box next to Search System Folders and Search Hidden Files And Folders.

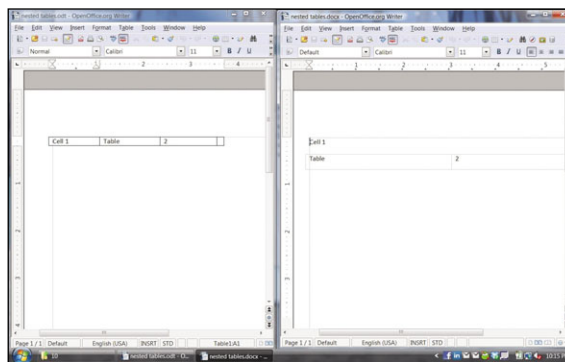
Right-click Common.xcu in the search results and click Open With and select WordPad from the list. Look for the following snippet of code (likely near the bottom):

```
<node oor:name="Misc">
  <prop oor:name="FirstRun"
oor:type="xs:boolean">
  <value>true</value>
```

Replace "true" with "false" and save your changes. If for some reason this doesn't solve the problem, do another search for Setup.xcu. Again, open this file in WordPad and look for the following snippet:



The first time you run OpenOffice.org, you should be prompted to register the software. Click the Cancel button if you don't want to register, but don't just close the window. If you see the same prompt over and over, you may need to modify a configuration file.



On the right side is the standard OpenOffice.org DOCX converter. As you can see, the native converter has a problem with nested tables. On the left side is the same file in OpenOffice.org that has been opened using the Odf-converter from OpenOffice.org Ninja.

```
<prop oor:name=
"FirstStartWizardCompleted"
oor:type="xs:boolean">
  <value>>false</value>
</prop>
```

The quickest way to find it is to click the Search button and search for FirstStartWizardCompleted. Make sure the value is set to "true" to disable future prompts.

Compatibility Problems

The biggest upside to Microsoft Office is that virtually everyone uses it. If you receive a word processing, spreadsheet, or presentation document

from a friend, chances are that it will be in an Office format. OpenOffice.org does a decent job supporting Microsoft Office file formats, but it is not always perfect.

Problem: When you open .DOCX files created in Microsoft Word 2007 in OpenOffice.org, the format isn't exactly accurate.

Solution: OpenOffice.org natively supports .DOCX files, but the conversion isn't always perfect. Specifically, OpenOffice.org has issues with nested tables created in Word 2007. (A nested table is a second table within a cell of another table.)

OpenOffice.org Ninja offers a free .DOCX converter of its own that's easy to install and use. You can download the converter at tinyurl.com/5rnk4x. Click the Odf-converter-integrator link near the bottom, click the Download Odf-converter-integrator link on the resulting page, and then download the .EXE file for Windows. When the download finishes, launch the installer and follow the prompts to install the converter.

The converter integrates with Windows, but not with OpenOffice.org itself. If you try to open a document from within OpenOffice.org, you won't notice any improvements. Instead, simply navigate to the document you want to open and double-click it. The converter will open a command line window briefly while it converts the document and then launch OpenOffice.org Writer.

Although the file is named Docx-converter, it will also convert and open other Microsoft Office files, including spreadsheets and presentation documents, so you'll be able to easily open a variety of documents. ■

BY CHAD DENTON

Clean Out Your PC

Ditch Those Warm Fuzzies

What if your last blue screen wasn't Windows' fault? What if you can't blame your computer's recent slowness on hard drive fragmentation or TSRs (terminate-and-stay-resident programs)?

Believe it or not, dust buildup can actually cause some types of problems in your PC. As dirt, pet hair, and unidentifiable fuzzy bits cling to things that get hot, such as your CPU's heatsink, they impair the objects' ability to shed heat into the air. It's the same principle that makes your air conditioner so inefficient when the outdoor unit's cooling fins get caked with debris. You can think of a coating of dust as a gray blanket, dutifully keeping warm everything that should be kept cool.

Put simply, cool-running devices last longer than those that run hot. Excessive heat can shorten the life span of the CPU, the GPU (graphics processing unit), the motherboard chipset (core logic chips), the RAM, the hard drive, and other components. As heat builds up in an electronic part, such as a silicon chip, its resistance to electron flow increases, too. That resistance generates even *more* heat, which in extreme cases can kill the part stone dead.

Thankfully, motherboard manufacturers started to build thermal protection into their wares starting in 2002 or so. However, thermal protection can cause other problems. For example, if a CPU gets too hot, the BIOS (basic input/output system) may throttle down the processor's clock speed to compensate. This cuts heat production, but it also drastically slows down the computer. If temps rise too much, the thermal protection mechanism may simply shut down the system. The trouble with an unexpected shutdown



is that it can corrupt data if a hard drive doesn't have time to write crucial, cached information to its disks before the power turns off.

So how much of an effect can a little dust have inside a computer? In a study commissioned by Falcon Safety Products (www.falconsafety.com)—which, by the by, sells Dust-Off PC cleaning products—a group called Team IronMods attempted to find out. They coated a desktop PC's interior with dust and then cleaned it out with compressed gas.

The experimenters found that the PC's processor ran about 10% hotter when its cooling ability was impaired with dust. The GPU really suffered, however, with a nearly 28% climb in

temperature. When the researchers pushed the chips to their limits by overclocking them (raising their clock speeds), the CPU ran at a 37% higher temp, and the GPU became almost 23% hotter.

More to the point, the dusty PC crashed when overclocked to settings at which it could run stably when clean. After the researchers blew out the tumbleweeds with Dust-Off, the PC's temperatures and overclockability returned to nearly normal.

We realize that you probably don't care to jeopardize your computer's warranty by overclocking, but bear in mind that it only takes one overheating device to introduce errors or shut down the PC. If a VRM (voltage regulation

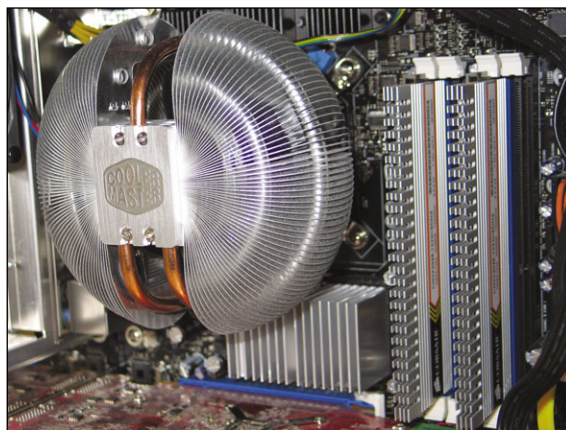
module, which smooths out the power for the processor), core logic chip (part of the main chipset on the motherboard), or other gizmo is already running close to its thermal limit when the system is clean, an accumulation of dust could send it over the edge. It's like throwing an afghan on someone with a fever: momentarily entertaining, perhaps, but hardly helpful.

The Case

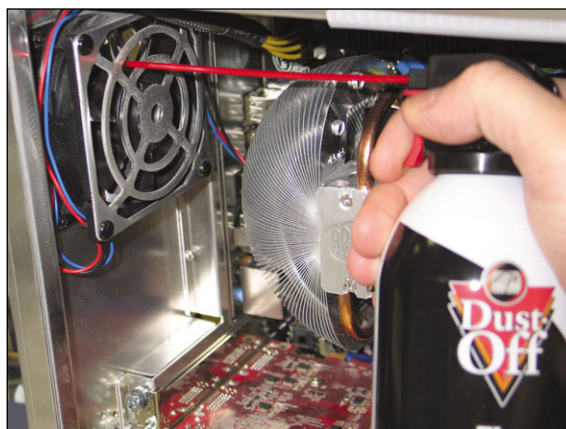
If you think the exterior of your PC case looks a little neglected, just wait until you see the interior. That's where dust bunnies tend to congregate, thrive, ruminate on life, and have more little bunnies. (On the other hand, they do tend to keep your computer free of weeds.)

Your first glimpse of a filthy circuit board might send you running for a vacuum cleaner, but hold up: That's not the way to go. A vacuum's crevice attachment may look like just the thing to clean out a PC that looks like something found behind the refrigerator, but it isn't. For starters, a vacuum could suck up loose screws or jumpers (small plastic and metal blocks that connect two pins on a circuit board). More critically, the friction of the particles dashing up the vacuum hose generates static electricity, which can kill fragile computer circuits with one zap.

It's better to blow out the cobwebs with compressed gas than to Hoover them up. You can do this inside your home, but it's better to carry the computer case outside, if you can. The dust has to go somewhere when you blow it out of the chassis, and it's no fun to watch it settle all over the room.



Metal fins help dissipate heat from critical components, such as the CPU, the motherboard chipset, and sometimes the RAM. However, dusty fins can't shed heat very efficiently.



Fan blades pick up their share of dust and grit, which makes them noisier and less efficient.



Some PC cases have foam, fiber, or mesh filters on their intake fans. You can clean reusable filter elements with dish soap and water.

Put on some glasses or goggles; if you have allergies, a dust mask isn't a bad idea, either. Spray a little Dust-Off in a safe direction to make sure that there isn't any liquid in its nozzle.

Now, with the end of the tube a couple of inches away from an unsuspecting lump of fuzz inside your PC, squeeze the trigger briefly. Keep the can level, not tilted, and spray the gas in short bursts. Pay special attention to crusty-looking heatsink fins, fan blades, and components around the CPU socket.

Note that Dust-Off contains compressed gases, not compressed air. Air usually contains water vapor, which certainly isn't something you want to spray into your PC. In contrast, Dust-Off's ozone layer-friendly aerosol doesn't blow moisture all over.

If you own an air compressor, however, you can use it to blow out your PC's dust if you follow a few precautions. First, you'll need a suitable inline filter to capture machine oil and moisture before it sprays all over your expensive components. Secondly, ensure that the pressure of the outlet hose is dialed down to no more than 70psi (pounds per square inch), which is Dust-Off's maximum pressure, so you don't accidentally damage anything. Finally, keep the nozzle at least an inch away from any part of the PC to avoid any mishaps.

Some PCs have dust filters on their intake fans, which really help to keep the insides of their cases clean. On the other hand, when a filter gets clogged with gunk, it will hurt the fan's ability to force fresh air into the case, which means higher operating temperatures.

If your PC has filters, remove them according to the manufacturer's

To use a can of Dust-Off, first slip its red tube into its spray nozzle. Next, twist off the red safety tab right above it.

instructions. On a Lian-Li case, we had to pop off the front panel and slide the filter housing upward. Clean the filters with soapy water and let them dry thoroughly. Don't re-install them until they're completely dry; you can use your PC in the meantime.

As for the exterior of the case, an old toothbrush can help you dislodge fuzzies from the fan grilles, ventilation holes, and any other nooks and crannies where they congregate. Don't forget the back of the PC, where the PSU and possibly the graphics card have exhaust outlets, and where cable connectors seem to grow beards. A lightly damp cloth is usually sufficient to wipe away any dirt on the outer panels. For fingerprints and stubborn grime, try a dab of soapy water on a rag.

Monitor

The energy- and space-saving LCD has become the standard type of computer display in much of the world. However, for all their merits, flat-panels require more care during cleaning than do CRTs (cathode-ray tube monitors).

Your LCD's plastic screen may react with ordinary glass cleaner, so that's out. And if you wipe it with an old sock from the rag bag, you might leave microscopic scratches on the surface, which will show up as glare. Glare makes your eyes work a little harder to focus on what's on the screen, which eventually leads to eyestrain, which means a loss of productivity and unusual levels of crankiness.

Follow your flat-panel manufacturer's directions for cleaning your display. It's generally safe to use a specially formulated spray and/or a cleaning cloth made specifically for LCD and plasma TVs and monitors.

Our Dust-Off Screen Care kit (\$9.99) did a fabulous job of removing fingerprints, smudges, and unidentifiable bits of meals from our workhorse



Dust-Off says that its Screen Shammy cloth should suffice for most cleaning, but the Screen Spray helps to dislodge anything tenacious.

Dust-Off's Screen Care gives you a safe way to clean any display, including an LCD, without worrying about scratching the screen.

These oft-touched but seldom cleaned input devices are veritable oases of bacteria and germs.

If your peripherals' manufacturer doesn't offer any advice for cleaning its products, try using a soft cloth that's damp, not wet, with soapy water.

Some users swear by antibacterial wipes, although you might want to avoid the kind with bleach, which may discolor the plastic or your clothes. The wipes for use on skin are usually OK.

As for other cleaning agents, you might need to experiment a little. To find out whether a particular cleaner is safe to use without hurting the plastic, try a little dab of it on the underside of the mouse or keyboard.

Next, try to evict the crumbs and other bits that fall between your keyboard's keys. With your PC turned off, detach the keyboard and turn it upside down. Next, run your fingers along all of the keys a few times. The motion of the keys may help some loose debris to fall out. Next, turn the board right-side up and set it down. Run your vacuum cleaner's crevice attachment along the sides of the keys as you press them down with your fingers. Pick up the keyboard and rock it from side to side, then vacuum it again.

While you're at it, use your vacuum's hose attachment to touch up the mess of cables around your surge protector. These are typically out of reach during ordinary vacuuming, so the cables start to look like the Great Barrier Reef after a few years.

A clean PC is not only quieter and less prone to problems, but it also makes you feel better about sitting down to use it. And that's definitely smart computing. ■

BY MARTY SEMS

LCDs. The microfiber cloth was good for gently wiping away dust, and the spray in the kit helped us rub away some stubborn soil.

Keyboard & Mouse

Among the do's and don'ts of PC hygiene, here's a Don't with a capital D: Don't look up any statistics or analogies about the grunginess of the typical mouse and keyboard. Trust us.

Cable Management

Cleaning out your PC also means cutting down on clutter inside it. By taming the tangle of data and power cables inside the chassis, you can increase the effectiveness of the cool air flowing through the case. After all, if wide ribbon cables are blocking ventilation around your system's RAM or CPU, they might be contributing to strange, intermittent errors.

Tuck away or reroute any cables hanging around in the central space of the case. Plastic "zip" ties can help, but don't use metal twist ties because they can cause short circuits. If your PC has any ribbon cables, gently fold them out of the way or replace them with rounded cables available from many electronics stores. The clearer the path of airflow through your PC, the more effectively it will keep each component cool. ■

Q & A

Need help with your hardware or software? Looking for simple explanations on technical subjects? Send us your questions!

Get straight answers to your technical questions from *Smart Computing*. Send your questions, along with a phone and/or fax number, so we can call you if necessary, to: *Smart Computing* Q&A, P.O. Box 85380, Lincoln, NE 68501, or email us at q&a@smartcomputing.com. Please include all version numbers for the software about which you're inquiring, operating system information, and any relevant information about your system. (Volume prohibits individual replies.)



Troubleshooting

Q My computer frequently shuts down while I'm using it. I'm using Windows XP with the latest service pack. I don't see any error messages when it shuts down, nor when I restart it. Is it time to throw in the towel and buy a newer system? This one is four years old.

A Before you break out your credit card, there are some steps we can take to determine what might be the root cause of your computer's sporadic behavior. One of the best methodologies for troubleshooting is using the process of elimination. As Sherlock Holmes says, "Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth."

Whenever a computer system starts to exhibit strange behavior, it can usually be attributed to one of three factors; hardware, software, or user error. Sometimes problems can occur when more than one of these factors is at play, but in our experience, those are typically rare cases. And usually user error can be eliminated in all but the most unlikely cases.

To eliminate hardware issues, we start at the basics; electricity and cooling. First, make sure that your system is properly plugged into a surge protector or wall outlet. Loose connections here should be pretty obvious, but we've witnessed users who have flipped the power switch on their surge protector while working. Also make sure that you don't have too many devices plugged into a surge protector. Surge protectors (and extension cords) do have limits to how much power they can safely provide.

Next you'll want to make sure the computer itself is working properly. After shutting it down, disconnect it from the wall outlet or power strip and then open the case. Most cases have a side panel that is removed via a lever or by taking out a few screws. Once inside your case, check its general condition. If there's a lot

of dust built up, you'll want to remove it by carefully blowing it out with compressed air. Dust buildup can quickly cause a video card to overheat. When this happens, your display will often show odd artifacts or just a black screen. Once the card cools down, the system will work until the card reaches its temperature threshold again. (See "Clean Out Your PC" on page 85 for detailed cleaning tips.)

Also make sure that any fans are clear of blockage. Today's computer vendors give a lot of thought and effort into controlling the airflow in your computer, so any blockage can have deleterious effects.

The next step is to verify that your hardware is working properly from Windows' viewpoint. Two primary culprits are failing memory chips and failing hard drives. You can test memory chips with Memtest86+ (www.memtest.org), a free diagnostic utility. You should also be able to diagnose your hard drive with utilities that can access the drive's SMART (Self-Monitoring Analysis and Reporting Technology) metrics. If the vendor of your hard drive doesn't offer a utility, you can download DiskCheckup (tinyurl.com/beonk) free.

Now it is time to focus on your software. Because you are up-to-date on your Windows Service Pack, you've eliminated one of the most common problems. Next you'll want to make sure that you don't have any other patches to apply. If you haven't configured Windows Update, now's the time to do so.

In addition to Windows, you need to make sure your system is clean of viruses or malware. One free tool that you can use is Malwarebytes (www.malwarebytes.org). It's capable of detecting and removing viruses and other malware.

Finally, user error is one area that might be causing the problem. Assuming that everything that we've previously discussed

checks out with a clean bill of health, there may be something unique to how you use your computer that might be causing sporadic outages. We think it's unlikely, but it's worth giving some thought before you replace your system.

Finally, before you decide to replace your system, take it into a computer shop and have them give it a quick once over. It shouldn't cost very much for them to check the basics we've outlined, and it might save you the expense of a new system. ■



Multimedia

Q I need to transfer movies from my Sony HDR-XR200V high-definition digital camcorder onto my HP Pavilion d4790y. I'm using Windows Vista Ultimate. Do you know if a card with S-Video plus audio and/or an HDMI (High-Definition Multimedia Interface) input is available to install in my computer?

A There are numerous S-Video capture cards on the market that would work fine with your Pavilion, but we wouldn't recommend any of them for you. S-Video is significantly lower in quality than the footage

captured by your Sony camcorder. HDMI input cards are also available and would be able to retain the video quality of your footage, but we have a third option we'd recommend. Your Sony camcorder has a USB 2.0 output, and your Pavilion has a USB 2.0 port. USB 2.0 isn't as fast as an HDMI card, but it won't cost you a cent to use.

If you find that the USB port just isn't fast enough for you, an HDMI capture card such as Blackmagic's Intensity Pro (\$199 at www.blackmagic-design.com) would be an excellent, though pricey choice. ■



Miscellaneous

Q I forgot the BIOS (Basic Input/Output System) password of my Compaq CQ20-125TU. I want to upgrade its BIOS with a new version from Compaq's Web site, but I can't because I can't access the BIOS. Could you please help me?

A Most computers store their BIOS on a chip on your computer's motherboard. The type of chip used is typically an EEPROM (electrically erasable programmable read-only memory). Despite the seemingly contradictory name, you can easily upgrade to newer BIOS versions by "flashing" the new BIOS to the EEPROM, provided it isn't protected by a password.

Your BIOS is the cornerstone of your computer; it is the first application to run on most computers, determining which devices are present on the system and how to access them. Upgrading your BIOS is usually done so that you can access new types of devices that were not available when your computer was first designed. Sometimes vendors will also release BIOS updates to correct bugs.

Although most of the newest motherboards are using flash memory to hold the BIOS, user settings are stored in CMOS (complementary metal-oxide semiconductor) memory. CMOS memory requires a continuous trickle of electricity to retain the BIOS settings; a small battery attached to the motherboard usually provides this current of electricity.

Clearing your BIOS password is pretty straightforward; first you'll want to shut down your computer and then disconnect it from its power adapter and any peripherals. Next remove its internal battery and its RTC (real time clock) battery. After waiting 5 minutes, reverse these steps and your password (as well as all the other BIOS settings) will be reset to the factory defaults.

Although we made it sound simple, it's actually a bit more involved because your Compaq is a notebook. Accessing the RTC battery means taking apart the notebook's case. We can't adequately describe this process in our column, but you can download the service manual from HP free at tinyurl.com/mroomm. ■

FAST FIXES

COMPILED BY KRIS GLASER

Adobe Photoshop Lightroom 2.4

Update: This update for Adobe's Photoshop Lightroom software features several enhancements, including support for numerous new camera models such as the Nikon D5000 and Canon EOS 500D (Digital Rebel T1i).

Installation: To download this update, navigate to www.adobe.com. Mouse over the Downloads link at the top of the page and choose Updates from the list. In the Find Product Updates box, choose Photoshop Lightroom – Windows (choose the Macintosh option if you are running a Mac) and click Go. In the Updates spreadsheet, choose Adobe Photoshop Lightroom 2.4 in your preferred language and on the resulting page, click Proceed To Download in the gray box. On the next page, click Download Now and save the file to your hard drive. Install the update by locating the file and double-clicking it to begin the installation process.

www.adobe.com

Nero BackItUp & Burn 1.0.5

Update: This update addresses many issues and offers several enhancements for Nero's BackItUp & Burn software, including corrections and improvements for Asian languages, password handling, and string corrections as well as improved file backup methods and drive backup restore options.

Installation: Visit www.nero.com and click the Support link at the top of the page. Choose Downloads from the list and on the next page, click Nero BackItUp & Burn from the product icons at the top center of the page. Click Update on the left menu and on the resulting page, click the gray Download arrow on the right. Save the file to your hard drive. Once the download is

Mozilla's Firefox 3.5 includes many new enhancements, such as Private Browsing, which allows users to browse the Internet without leaving behind a "browsing fingerprint" on the PC . . .

complete, double-click the file to begin the installation.

www.nero.com

Update For Windows XP

Update: This update for Windows XP lets users use Internet Explorer 7 to download files on a computer that has IME (Input Method Editor) enabled. IME allows users to input characters from East Asian languages such as Japanese, Chinese, and Korean using a standard keyboard.

Installation: Point your browser to www.microsoft.com/downloads, type KB932823 in the search field at the top of the page, and press ENTER. Next, click the resulting link titled Update For Windows XP (KB932823). On the Download page, click the Download button found above Quick Details in the blue box. Save the file to your hard drive. Once the download is complete, locate the file, double-click it to begin installing the update, and follow any on-screen directions to complete the update.

www.microsoft.com

IE8 Update For Windows XP

Update: This update addresses security vulnerabilities in Internet Explorer 8 that could allow a malicious user to compromise your WinXP operating system.

Installation: Go to www.microsoft.com/download, type KB972260 in the search bar at the top of the page,

and press ENTER. From the list of results, choose Cumulative Security Update For Internet Explorer 8 For Windows XP (KB972260). On the next page, click the Download button found in the blue box and save the file to your hard drive. To install the update, locate the file and double-click it. Follow any on-screen directions to complete the installation.

www.microsoft.com

FIX OF THE MONTH

Firefox 3.5

Update: Mozilla's Firefox 3.5 includes many new enhancements, such as Private Browsing, which allows users to browse the Internet without leaving behind a "browsing fingerprint" on the PC, and Super Speed, which makes browsing two times faster than Firefox 3. Other improvements include the ability to organize tabs by dragging and dropping, more add-on customizations, and Session Restore options.

Installation: To download the latest Firefox browser, visit www.mozilla.com. Click Download Firefox – Free in the green box and save the file to your hard drive. After the file is downloaded, double-click it to begin the installation.

www.mozilla.com

Frequently Asked Questions

Answers to users' most common questions about **Digital Camcorders**

Most recent
digital
camcorders
feature the
ability to
record both
video and
still images.

FAQ Is there a quality difference among digital camcorders that record on MiniDV tape, a recordable DVD, to a flash drive, or a hard drive?

A few years ago, the limited capacities of recordable DVDs, flash drives, and hard drives meant that tapes, such as MiniDV, offered the highest quality because manufacturers could use less compression to fit the video onto tape. The introduction of higher-capacity removable storage evened the playing field, even for HD camcorders, which capture video that requires greater storage space. MiniDV still offers high quality, but it's likely you'll be content with the quality of any of the current storage options.

FAQ How much video can my HD digital camcorder record?

With HD video, there are a lot of factors that can affect the number of hours (or minutes) your HD digital camcorder can record. First, it depends on the video resolution, such as 720p or 1080p, and the **bit rate** (the amount of data recorded over one second—higher numbers require more space and improve quality) you record. Based on those numbers, you'll have a given number of minutes per the amount of storage capacity on your digital camcorder. To suit your recording needs, most digital camcorders feature a few quality recording modes that you can switch between to control how much video you can capture.

FAQ Why do most newer digital camcorders use a USB port, rather than the FireWire port, for transferring video to a PC?

Digital camcorders that use tape play the video in real time as your PC records the video to the PC. Most tape-based digital camcorders feature a FireWire port because the connection is more reliable than USB for streaming video. With digital camcorders that record to an internal hard drive, removable flash drive, or a recordable DVD, you typically import files to

the computer by copying a file from the digital camcorder to your PC. Because you aren't streaming the video, a consistent transfer speed isn't as important. Additionally, USB ports are more ubiquitous than FireWire ports, so USB is more convenient.

FAQ What does 3CCD mean?

Some digital camcorders use one image sensor to capture the red, green, and blue colors that the camcorders record to create the correct color video. A 3CCD (charge-coupled device) camcorder dedicates one image sensor for each of the three colors to deliver more accurate color quality, produce brighter colors, and improve video detail.

FAQ Can I take pictures with my digital camcorder? If so, will I need to bother carrying a digital camera with me?

Most recent digital camcorders feature the ability to record both video and still images. That being said, the still image resolution is typically much lower, such as 3MP (megapixels) or 5MP, than the image resolution found on digital cameras. Additionally, most digital camcorders don't offer the scene modes or manual lighting adjustments found on digital cameras, so it's not ideal for those looking for perfect prints. Still, the feature is handy if you only have room to carry one device.

FAQ What are the most essential accessories for my digital camcorder?

Digital camcorders generally include a battery and media for storing your video, but it's wise to invest in a backup battery and secondary storage, assuming the camcorder can record video to tape, DVD, or flash media. It's also a good idea to purchase a case to protect the digital camcorder and hold your other accessories. If you plan to use the camera for a long period of time, a tripod will help keep your shots steady. ■

Are you having trouble finding a product or getting adequate service from a manufacturer? If so, we want to help solve your problem. Send us a description of the product you're seeking or the problem you're having with customer service. In billing disputes, include relevant information (such as account numbers or screen names for online services) and photocopies of checks. Include your phone number in case we need to contact you.

Letters may be edited for length and clarity; volume prohibits individual replies.



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Symantec Provides A Fix & Sony Explains A Battery Issue

I'm unable to upgrade the Norton 360 Premier edition I purchased because the product key isn't recognized by the system. I believe the problem is that I erred by not deleting some software that came as a trial on the PC when I purchased it and instead inadvertently deleted the full version of Norton I had bought and installed. So, when alerted to upgrade, I indicated in the affirmative, but in the process, the product key was not recognized. I don't want to purchase a completely new product, as it would be less costly to merely upgrade. I submitted the original disc along with other evidence of legal purchase, as requested by Symantec, and have attempted to contact them several times but have been unable to resolve this issue. Can you help me get through to them?

Paul
San Diego, Calif.

On July 29, we contacted Symantec on Paul's behalf to see if someone could help him resolve his problem. Shortly, a Symantec product support analyst called him. He determined that the issue was that the version of Norton 360 Premier Paul had purchased was wiped off of his computer when he inadvertently agreed to try the preloaded trial version.

Paul gave Symantec remote access to his computer, and the Symantec representative removed any old versions of Norton from his computer, downloaded the latest version of Norton 360 Premier Edition 3.0, and configured it. Paul reports that his problem is resolved and that Symantec gave him a 540-day license instead of the typical 360-day license for his trouble.

Tonight, I checked my Sony VAIO VGN-SZ750N notebook after it sat at home all day, completely powered off, and in that 14-hour period, my computer consumed 9% of the Li-Ion battery. The battery meter in the System Tray indicates that the battery's charge dropped from 80 to 71%. Sony's Tech Support team has stated that it's normal for the PC to use power from the Li-Ion battery when the PC is completely powered off. I know that all the PC functions that occur on the motherboard when the PC is turned off are powered by the CMOS (complementary metal-oxide semiconductor) battery, so I don't believe the notebook's battery should be losing this much power.

I purchased this notebook on Oct. 1, 2008, and have had power issues from the first day I owned this PC. In March 2009, Sony replaced the original defective Li-Ion battery that could not hold a charge. This new replacement Li-Ion battery is presently holding a charge when not in the notebook but not while in the notebook. I appreciate anything that you can do to resolve my battery/power issues with this notebook.

Kevin
Smithville, Ohio

In mid-July, Kevin contacted Action Editor because his notebook was losing 10 to 13% of its battery life per day, even when it was completely powered off and unplugged.

Action Editor put Sony in touch with Kevin about his battery problem. A Sony representative called him and explained that a certain amount of battery power loss is normal for his type of notebook. Kevin's percentage of battery loss was within the normal range, but Sony promised to allow him to return the notebook for diagnostic testing if the percentage crept up to 15% per day or more. ■

Staying In Sync

Our place is crawling with computers. Between my wife's netbook, my work laptop, my home office machine, and our family PC (not to mention the Xbox 360 and several smartphones), we rarely have fewer computers than people in the house. Having Internet, email, and shared music so close at hand is great. Tonight I'm in the nook, which has better XM reception for the Phillies-Cubs game and is closer to the kitchen's supply of baby bottles. Tomorrow night, I may be proofreading in the basement, watching "The IT Crowd." Perhaps I'll do a final read-through on the train before submitting from my phone. At some point, though, your data has to actually *live* somewhere or you'll end up managing multiple copies of every file or, even worse, creating tech support nightmares from lost or corrupted files. Keeping your files in sync across multiple machines can be a challenge, but there are a few tools that can help you manage (and a few not worth the effort).

The method I use most often is simple: file sharing. On each machine, I created a single folder in the C: drive called Shares. It's the only folder I share, and I move files into and out of the shared folder whenever I want to move them from or to another machine. It's easy to periodically clean out the Share folder and back up (or move) each file to wherever I want to store it permanently. Keeping a single shared folder helps protect the rest of my data from anyone who happens to crack my wireless encryption, and it also prevents me from accidentally overwriting or deleting important files. In either Windows Vista or Windows XP, you'll have to enable file and printer sharing and then configure the properties of your chosen folder to grant access from other machines on your network. Remember to allow yourself to change files, or you won't be able to edit existing files or move anything into that folder.

On the other hand, you may have network folders and file shares at work that are inaccessible from home, or vice versa. In that case, carry your files with you. Instead of trying to save the "master" copy on a single machine, keep it on a USB thumb drive or other portable storage. I regularly keep articles in progress, screenshots, and a few favorite albums on a

compact 1GB USB drive. I keep it in my laptop bag so that I can write no matter what machine I happen to be in front of. I can gather and edit images from both Vista and WinXP machines, and I can listen to music even from networks that block media sites. If you want to make extremely large files (or large numbers of files) available from multiple machines that aren't on the same network, consider an external USB hard drive. External drives pack hundreds of gigabytes into a

unit the size of a small book. I use mine for a backup, but if I wanted to take my iTunes library on the road or clean up my Outlook archive folders from the basement while watching a movie, I could just disconnect and reconnect without much hassle.

In my experience, anything more is overkill for most people. Plenty of companies will gladly promote their special utility for syncing files and folders between different

machines or for working offline on network-stored files and folders. I just find it easier to do some minor planning ahead and save the files on a shared folder or portable drive. Backup utilities are different—they're indispensable. But for keeping files in sync across multiple machines, I've found that the various "briefcase" or "dropbox" utilities (some free, some not) take as much time and effort to configure and maintain as the tricks above. What's more, fewer applications means fewer things that can go wrong and require your troubleshooting attention. Unless you're dealing with an insanely complicated mix of machines and data or have the kind of SOHO network that can take advantage of NAS (network-attached storage) efficiencies, staying in sync doesn't need to be a full-time job. ■

BY GREGORY ANDERSON

Gregory Anderson is a regular contributor to Smart Computing and several other technology publications. He keeps a sharp eye (with the help of thick glasses) on computing trends and enjoys working with geeks of all stripes—most of the time. Get in sync with Greg at gregory-anderson@smartcomputing.com.





MFC-255cw

\$99.99 | Brother | www.brother-usa.com

I've had real success using Brother's new inkjet all-in-one printer. It prints bright, clear documents and pictures and handles copying, faxing, and scanning duties. The device also has an easy-to-use paper tray that accommodates several printer sizes, including photos. That may not seem to be a big deal, but if you've spent much time unclogging jammed printers, you know why I like a paper tray that does its job right.

Another highlight: I connected the printer to our test wireless network in fewer than five minutes. I wouldn't mind seeing a bigger display than the one-line screen on the MFC-255cw, but it offers better performance than I'd expect at this price point, so I'm not complaining.

by Joshua Gulick



Kensington MicroSaver DS Keyed Lock

\$49.99 | Kensington | us.kensington.com

Kensington's MicroSaver DS Keyed Lock is a solid security investment for anyone with a notebook that needs safeguarding. Its features are designed for ultra-thin notebooks, but it's worthy of any compatible laptop.

The T-bar locking mechanism is simple to use: You simply insert the lock into the security slot, turn the key 180 degrees, and remove the key from the MicroSaver lock. To keep the cord out of your way, Kensington provides a durable rubber strap to loop around the five feet of tempered steel cabling.

by Joanna Safford



Scoshe Recoil iPod/iPhone Car Charger

\$29.99 | Scoshe | www.scoshe.com

There are a broad range of car chargers for iPods and iPhones, but Scoshe differentiates the Recoil from the standard bunch by its retractable cable.

When the Recoil is inserted into the 12V ACC (car lighter) jacks and connected to your Apple-based portable device, a blue power status light indicates that your iPod or iPhone is charging. You can store the 30-pin connector in the magnetic dock while the cable isn't in use.

Essentially, the Scoshe Recoil functions as a space-saver and an easy-to-use accessory for multiple generations of iPods and iPhones.

by Joanna Safford



4GB JumpDrive TwistTurn

\$24.99 | Lexar | www.lexar.com

From style to security to size to speed, Lexar's JumpDrive USB memory flash drive line has something for every user type. If you're seeking a straightforward method to transfer everything from a new audio album to your business' work schedule for the coming week, the JumpDrive TwistTurn is ideal. Sporting a capless, keychain-worthy design that includes a hinged, rotating steel jacket to shelter the TwistTurn's adapter, the 4GB TwistTurn can hold 2,200 JPEG photos (at 6MP each). Also available in 2GB (\$14.99), 8GB (\$44.99), 16GB (\$79.99), and 32GB (\$129.99) sizes, the USB 2.0-speedy TwistTurn even integrates a blinking red LED to indicate when data is being written to the drive.

by Blaine Flamig

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